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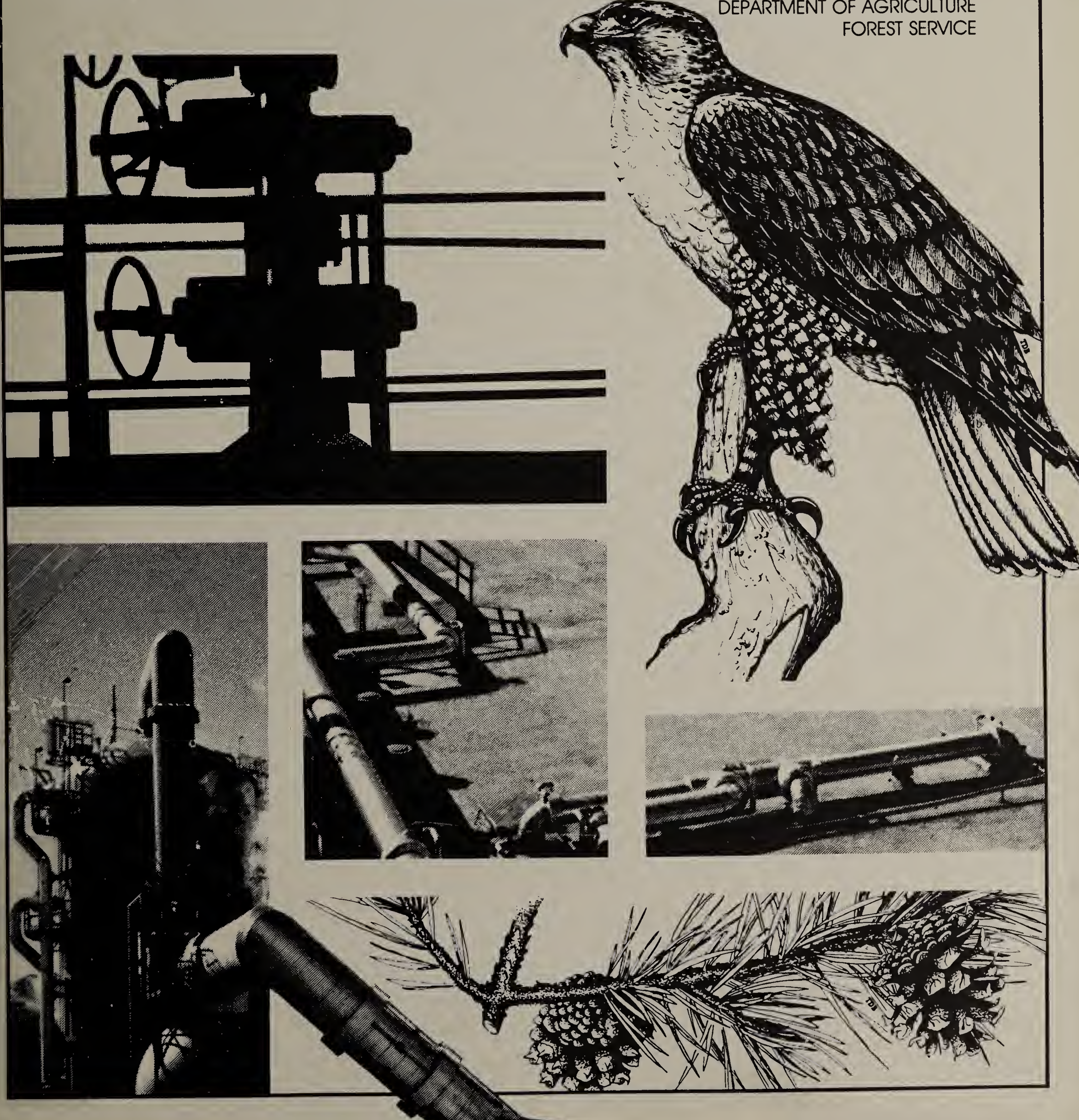
RILEY RIDGE NATURAL GAS PROJECT

CULTURAL RESOURCES TECHNICAL REPORT

MAY 1983

Prepared by:
METCALF-ZIER for

DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
DEPARTMENT OF AGRICULTURE
FOREST SERVICE



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CULTURAL RESOURCES TECHNICAL REPORT
FOR THE RILEY RIDGE
ENVIRONMENTAL IMPACT STATEMENT

April 1983

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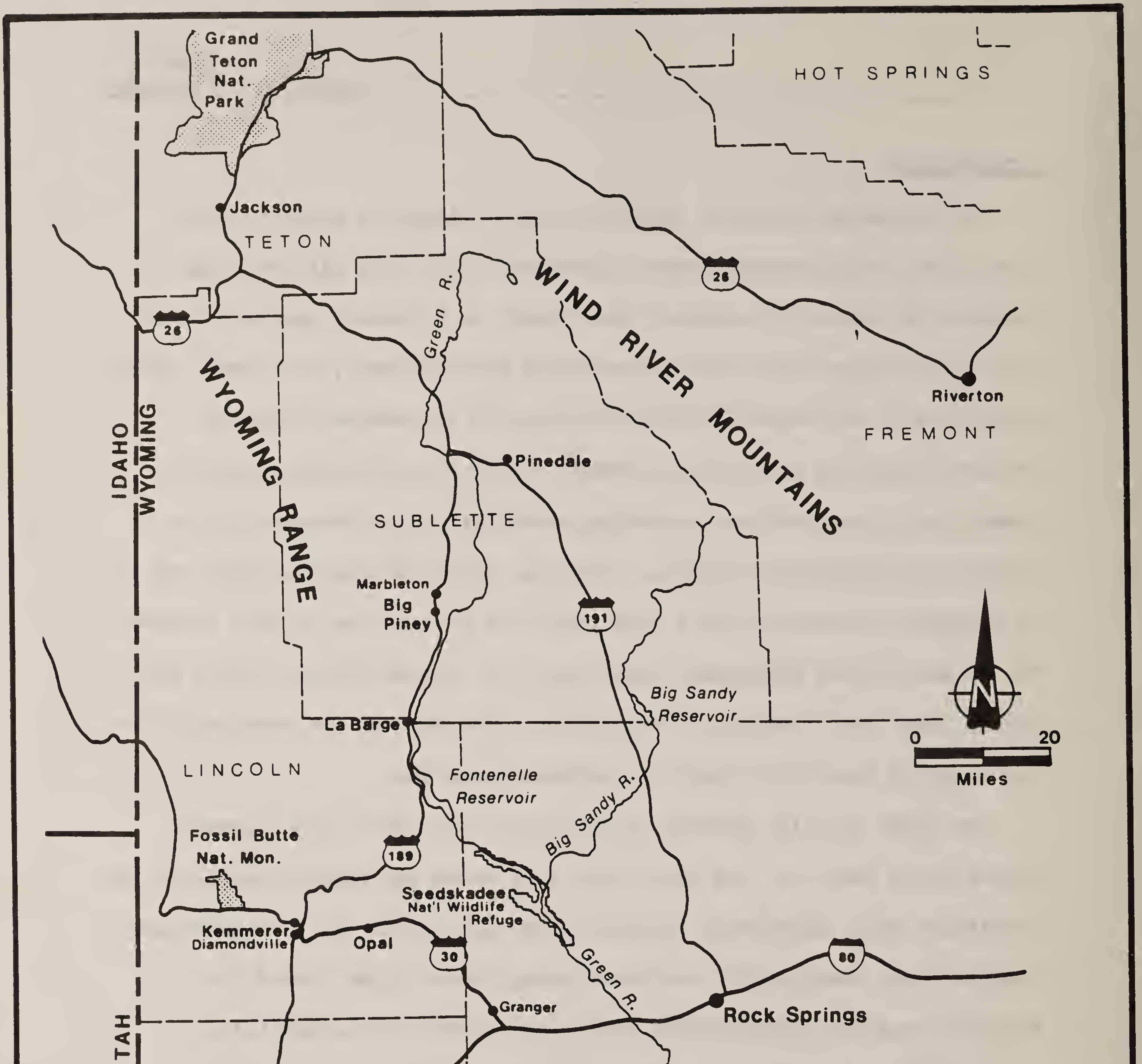
INTRODUCTION

The following technical report has been written in support of the Riley Ridge Environmental Impact Statement (EIS). The EIS is being prepared in advance of proposed development of a natural gas well field, sour gas treatment facilities, associated rights-of-way, and other related facilities to be located in three counties in southwestern Wyoming. Primary facilities are to be situated largely in southwestern Sublette County, with rights-of-way extending southerly and southeasterly into Lincoln and Sweetwater Counties. Private, state and federal lands are to be affected. Several private applicants are cooperating in this venture. The Bureau of Land Management (BLM) and U. S. Forest Service (USFS) are taking joint lead during EIS preparation. The BLM has the responsibility for specific lead with regard to cultural resources.

The study area is situated in the Green River Basin and adjacent upland areas (Map 1). The well field lies along the eastern margin of the Overthrust Belt, manifested locally as the Salt River and Wyoming Ranges. Rights-of-way trend mainly southward along Oyster Ridge toward the Kemmerer area and southeasterly across the central basin and Little Colorado Desert to the Rock Springs vicinity.

The area may be characterized generally as a cold, semi-arid steppe. Elevations range from 6,500 feet in the central Green River Basin to 10,600 feet on the flanks of the above-named mountain ranges. The only heavily timbered areas are on the mountain flanks, where precipitation averages up to 15 inches annually. The remainder of the study area is



MAP 1 RILEY RIDGE STUDY AREA

typified by sagebrush and mixed sagebrush-grassland vegetation communities, with annual precipitation of 6 to 9 inches. A narrow riparian zone straddles the Green River, bisecting the study area. The climate is strictly seasonal and is marked by short, hot summers and long, cold winters. Human habitation of the study area today is sparse, a condition which has apparently prevailed throughout prehistory and history.

STUDY OBJECTIVES

The technical report seeks to give direction to the management of cultural resources throughout the life of the project using all existing data as a basis for decision making. Three main objectives can be defined; these are:

(1) To construct an inventory of known prehistoric and historic cultural resources potentially affected by the project, and to identify sensitivity areas.

(2) To complete an inventory of all previously conducted archaeological and historical investigations in the area.

(3) To begin initial development of a compliance plan for inventory of the project area and mitigation of adverse impacts to significant sites.

For the purpose of EIS documentation, a one-mile-wide corridor bracketing all rights-of-way has been studied. It is not to be inferred, however, that any cultural property located within the corridor boundaries will necessarily be directly affected by project undertakings.

In addition to the Proposed Action, three project siting alternatives were analyzed for the Riley Ridge Project. The Buckhorn, Shute Creek, and

Northern Alternatives differ from the Proposed Action primarily in the location of certain plant sites and associated corridors. These alternatives change some aspect of the Proposed Action while keeping other aspects unchanged. Component alternatives are options dealing with small changes in the Proposed Action or siting alternatives designed to respond to specific concerns. The component alternatives deal with sulfur transport, power supply, and employee housing. These alternatives deal only with single components of an applicant's proposal or alternative and, thus are being considered separately from the siting alternatives. Inventories of known sites and pre-existing investigations are divided first on the basis of the particular action with which they are associated (above), then secondarily according to specific project facility within the action. Facilities within each proposed or alternative action are of three principal varieties and consist of:

(1) The well field, broken into ten units and including specific well sites and associated rights-of-way.

(2) Non-well field rights-of-way including transmission lines, railroads, vehicle roads, natural gas pipelines, sulfur pipelines, carbon dioxide sales pipelines, and methane sales pipelines.

(3) Non-linear facilities including hydrogen sulfide treatment plants, sulfur loadout sites, and construction camps.

Throughout the study, a distinction is made between prehistoric and historic cultural resources. Prehistoric resources are defined as those occurring prior to the advent of written records in the area at ca. AD 1750. Historic resources are those that post-date this time. In order to achieve a measure of ethnic consistency with regard to cultural narratives and site reporting, all American Indian sites will be included among prehistoric resources even though some may post-date European contact. Historic sites will comprise remnants of Euro-American activity and will generally not pre-date the 19th century AD. This distinction applies to the reporting of known sites as well as the culture-historical narratives.

REPORT ORGANIZATION

The report that follows is organized into three major sections. Chapter 1 (Affected Environment) begins with a prehistoric and historic overview of southwestern Wyoming. This chapter also includes a description and inventory of previously conducted cultural resource investigations (both prehistoric and historic) in the project area, followed by an enumeration of known sites. These data are provided with an interpretive context in the form of prehistoric and historic cultural narratives. A discussion is also provided of prehistoric site-environment relationships in the study area as they are understood on the basis of existing information.

Environmental Consequences (Chapter 2) consists of two principal subsections. The first is an introduction that identifies significance criteria used in the assessment of cultural resources affected by the project. The second subsection assesses impact to known prehistoric and historic sites in the study area. Impact definitions are followed by assessments conducted according to proposed or alternative action, subdivided by specific project facilities. Only those sites that are eligible or potentially eligible for National Register inclusion are considered.

The final section of the report, Chapter 3, describes methods employed in the research of data pertaining to the Riley Ridge study area.

Four appendices are included at the end of this report:

Appendix A - Wyoming Basin Area Radiocarbon Dates

Appendix B - Catalog of Land Entries and Related Actions

Appendix C - Lander Cutoff Assessment Map Set

Appendix D - Data Tables (This appendix is not included in the public distribution of this report. Appendix B is available for review from the BLM at the Kemmerer Resource Area Office.)

A compliance plan for mitigation of adverse impacts of the Riley Ridge Project to cultural resources is being developed separately. The plan will address the need for specific types of additional cultural resource investigations, and will outline agency participation and ideal mitigation procedures.

CULTURE HISTORY OF SOUTHWESTERN WYOMING WITH SPECIFIC REFERENCE TO THE RILEY RIDGE STUDY AREA

PREHISTORIC NARRATIVE

Introduction

The reconstruction of prehistoric culture histories is a continuous process. Each field project adds incrementally to the body of data available for such efforts. Within southwestern Wyoming in general, and including the Riley Ridge study area, the available data have grown considerably since any comprehensive culture history was assembled (e.g.

Frison 1978). Further, no existing exhaustive culture history has focused on southwestern Wyoming. Rather, the area has traditionally been treated as a sub-area of larger culture areas and categorized as a fringe or frontier.

The perspective of this summary culture history is narrower in focus. Until a few years ago, there were simply not enough dated sites to form the basis of a localized culture history. Discussion of southwestern Wyoming prehistory, by default, had to be in reference to broader, regional cultural chronologies. This is no longer true.

The following discussion will proceed under the assumption that, while the prehistoric occupants of southwestern Wyoming shared in broad cultural traditions whose identifying traits occur over wide regions, there were enough *in situ* cultural developments to warrant a more localized cultural historical reconstruction than is now extant. Instead of extrapolating from Frison's (1978) analysis of the Northwestern Plains or from the various discussions of Great Basin and Northern Colorado Plateau cultural chronology (Heizer and Hester 1978; Schroedl 1976; Holmer 1978), this discussion begins with an examination of the local data and attempts to summarize these data into a localized culture history.

It has been traditional to divide the regional chronology into five time periods. Initially this was a slight modification of Mulloy's (1958) scheme for the Northwestern Plains and more recently it is a modification of Frison's (1978) revision of this scheme that forms the basis of this five-period division. Rather than following Frison's lead in naming the Archaic periods Early, Middle, and Late Plains Archaic, investigators have simply dropped the use of "Plains" in the named time periods in recognition of the fact that the area is not truly a part of the Plains, and that there are cultural similarities to areas other than the Plains.

The current traditional view of chronology in southwestern Wyoming is as follows:

Paleo-Indian	12,000+ B.P. - 7000 B.P.
Early Archaic	7000 B.P. - 5000 B.P.
Middle Archaic	5000 B.P. - 3000 B.P.
Late Archaic	3000 B.P. - 1500 B.P.
Late Prehistoric	1500 B.P. - 300± B.P.

In the summary of prehistoric site data in this report this is the main chronological scheme followed, primarily because it is the scheme most widely used in site recording and in the reports researched for this project. However, in recent years investigators have increasingly had to face inadequacies in the scheme. It has long been recognized that influence from the Great Basin, particulary in terms of subsistence orientation, is important in southwestern Wyoming. Further, many of the projectile point styles common to the Wyoming Basin have close counterparts in the West. Recognizing this, major reports written recently have made reference to the published Great Basin chronologies (e.g. Kainer 1981; Zier and Peebles 1982). In response to the evident inadequacies of the current "model" of the culture history of the Wyoming Basin area, the results of a reassessment of the subject are presented here.

The Area

The area under discussion here is by necessity much larger than the Riley Ridge study area. Certainly some sites contributing data exist within the study area, but for the most part, excavated sites which form the building blocks of a culture history are scattered over a much larger region. Instead, the area of interest will be roughly the physiographic province of the Wyoming Basin (Thornbury 1965).

Thornbury divides the Rocky Mountain System into four provinces, the northern, middle, and southern Rockies, and the Wyoming Basin. The Wyoming Basin is characterized as an extension of Great Plains topography westward through the gap between the Laramie Mountains of the Southern Rockies, and the Bighorn Range of the Middle Rocky Mountains (Thornbury 1965: 323). It is bordered on the south and west by the Uinta, Wasatch, and Wyoming Ranges, but generally affords a route of passage between the Great Plains and the Great Basin and Northern Colorado Plateau provinces.

More specifically, the area covered in this synthesis is bordered on the south by the Yampa River, on the east by the Sierra Madre mountains and the North Platte River, on the north by the Sweetwater River and on the north and west by the upper limits of the Green River Basin. These boundaries are somewhat arbitrary, but they can be adjusted.

One of the key aspects of the Wyoming Basin is its geographic position between other major physiographic provinces, but certainly another is the wide range of topographic features and biotic communities found within and immediately adjacent to the Basin. Elevations range from as low as 6,000 feet in the North Platte Valley to in excess of timberline (10,000-12,000 feet) in the surrounding mountains. Vegetation communities are diverse and include true grassland as well as desert shrub. Vertical zonation is common in the various uplifts in the Basin and especially so in the surrounding mountains.

Water is perhaps the scarcest of the key resources for human habitation. The major contemporary drainages are the North Platte River on the east and the Green River, which forms the western sub-basin of the province. The Great Divide Basin (or Red Desert Basin) drains internally, while the Washakie Basin drains via poorly developed intermittent streams into the Little Snake River and the Green River below the Green River Basin proper.

The Radiocarbon Record

Some but not all cultural sites in western Wyoming contain carbon materials which are suitable for radiocarbon dating. A total of 199 radiocarbon dates were recently compiled for this revision of Wyoming Basin culture history. This list is nearly complete, containing dates contributed by various institutions, companies, and individuals from both published and unpublished work. The current list of dates is presented as Appendix A. These dates are also summarized in graph form as Figure 1.

Instead of counting the number of sites representing each time period and relating this to occupation density, the number of radiocarbon dates representing each time period has been counted and related to occupation density. The assumption here is that the frequency of dates can be interpreted as reflecting general trends in intensity of occupation. Differential preservation and differential discovery potential will, however, obscure actual levels of intensity of occupation. It might be valid to say the area was more or less intensively utilized from one millenium to the next, but invalid to directly compare population levels between millenia separated by several thousand years.

Before attempting any interpretation of these data, three important questions should be asked: 1) How much research bias influenced what samples were chosen for analysis? Research bias refers to the nonrandom selection of materials for radiocarbon dating. That is, a given time period may be over or under represented in the sample due to the possibility that the frequency of known sites may not represent the true intensity of occupation. 2) Has differential preservation of sites of various ages affected the observed pattern? and 3) is the

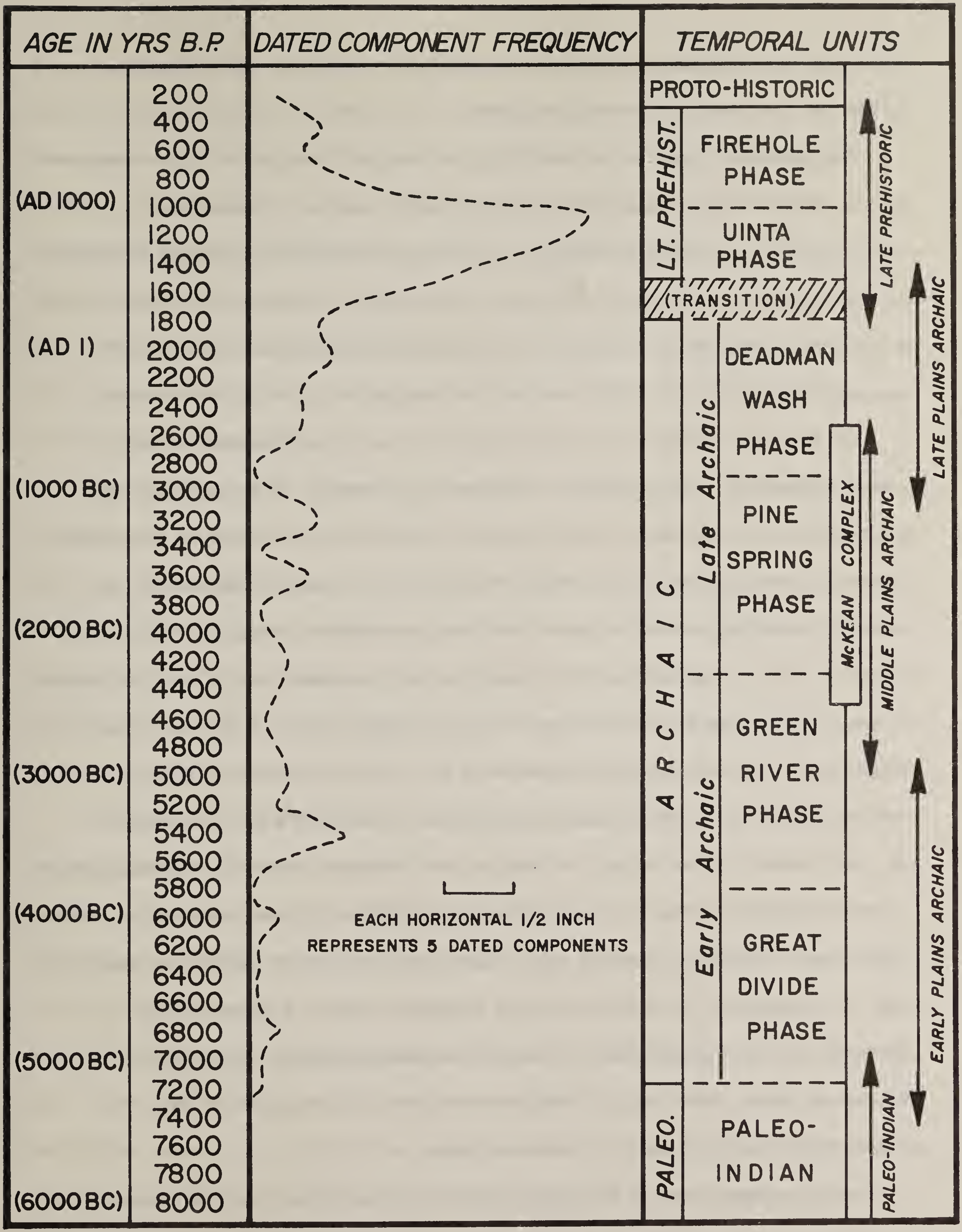


FIGURE 1. GRAPH OF RADIOCARBON DATE FREQUENCIES RELATIVE TO TIME PERIODS.

existence of a radiocarbon date a reasonable reflection of population levels or frequency of use of an area?

The research bias is probably not a serious problem in this sample of dates. Sites were excavated largely because they were threatened by construction. The choice of what sites were studied was largely dictated by the placement of energy development projects. Although this process of selection is not truly random, it is probably sufficient to eliminate research bias as a cause for concern in interpreting this data sample.

Differential preservation is perhaps the most difficult problem to assess. Geologic superposition combined with cycles of deposition and erosion tend to obscure or destroy sites. It could be expected that with increasing antiquity, sites would be less well preserved and harder to locate. Assuming a more or less constant population level, it would be expected that a radiocarbon curve would show a marked trend from few dates of great age to many dates of recent age. Examination of actual data shows only a superficial correspondence to this expectation. There are very few dates of Paleo-Indian age, and many dates of Late Prehistoric age, but from 7300 years ago to the present there are marked fluctuations in date frequency. These fluctuations probably reflect a combination of prehistoric population levels and general conditions of climate at the time of occupation. In other words, frequent dates in a given time interval probably mean that not only were people present in greater numbers at that time, but in addition conditions favorable to site preservation were present at the same time.

The interpretation of how the existence of a given date corresponds to population level or frequency of use of an area has additional complexities. Factors such as site or feature function and season of the year could readily affect the number and types of fires built, whether or not charcoal was left in the fire pit, and whether or not the features or sites were preserved at all. With broad changes in subsistence and settlement patterns through time, such as the subsistence shift from Paleo-Indian to Archaic patterns, there could well be major differences in the numbers of datable features left by the prehistoric peoples, and in the likelihood that such features would be preserved and subsequently recovered by archaeologists.

There are no ready answers to the above problems. In the following discussions it will be assumed that the data base is distorted. Focus will be on general trends. It is believed that approaching the data with a level of suspicion is necessary, but that using the data in the manner which follows is legitimate. It is, at any rate, consistent with approaches to similar bodies of data made by others in interpreting radiocarbon dates (e.g. Benedict 1978; Schroedl 1976; Mackey et al. 1982).

In Figure 1, the frequency of radiocarbon dates from archaeological sites thoughout the Wyoming Basin is plotted. The left-hand column is essentially a vertical time line , calibrated at 200-year intervals and extending from 8000 years ago (bottom) to 200 years ago (top). The relative occurrence of available dates per 200-year time segment is indicated by the curve in the center column; a swelling of the curve to the right indicates a greater number of dates (i.e., dated components). Multiple (repetitive) dates from a single site were at times eliminated from consideration. In a case where several dates from a single site appeared to be contemporaneous, the dates were averaged to produce a single value (Long and Rippeteau 1974:205-215), and only one value is registered on the graph. The column to the right indicates cultural periods and phases as they correlate temporally with the frequency graph.

In examining Figure 1, three things are immediately apparent. First, there are very few dates older than 7300 radiocarbon years. Second, between 7300 years and 1800 years there is a fluctuating, but relatively consistent, pattern of dates. Finally, there is a very dominating rise in date frequencies beginning at about 1800 years ago. This peaks between 1000 and 1200 years, then falls off to the earlier, relatively low frequency of 3-6 dates/200 years. Each of these broad observations are discussed in the Cultural Chronology section.

In examining the radiocarbon evidence and comparing that to our other main chonological yardstick, projectile point styles, one is forced to conclude that the traditional five-part scheme is no longer suitable. As a general description of time the scheme still has use in that it is accepted, and archaeologists generally understand the scheme. However, the scheme does not fit the data as well as it might.

At this time it is proposed that chronology be discussed on two levels of analysis: one based on evidence for generalized broad adaptive strategies, and another that deals more specifically with details of trait lists. These trait lists should include as many lines of evidence as possible including material culture inventories and styles as well as settlement and subsistence variables.

The Cultural Chronology

On a general level, the radiocarbon evidence, as well as our reconstruction of prehistoric subsistence patterns, suggests the use of four broad time periods: Paleo-Indian, Archaic, Late Prehistoric, and Protohistoric. In examining details of the radiocarbon data as well as tool inventories and tool styles (mainly projectile points), and even in examining evidence for the relative importance of hunting versus gathering (Mackey et al. 1982), it is certainly possible to define shorter time intervals. These should, however, be defined on a level of analysis which is quite detailed.

The four broad time periods are discussed initially. In these discussions some suggestions for chronological divisions on the detailed level will be presented. While data on the Paleo-Indian period is scant in the area, it is not altogether lacking. However, what we know about the period still relies extensively on data from outside our specific area of coverage. This is not true for the latter periods, which are well represented by dated sites.

Paleo-Indian Period

Very little direct data concerning this time period, roughly 12,000 - 7,500 years ago, comes from southwestern Wyoming; much of what is known about the period in general derives from work done elsewhere in Wyoming, particularly by George C. Frison. This period is generally accepted to be one in which the climate was wetter than present and savanna and grasslands were thought to dominate much of western North America. Herds of now extinct herbivores, particularly the wooly mammoth and various species of bison, apparently served as the primary focus in subsistence. The prehistoric cultures were evidently organized around the pursuit of these large mammals, although smaller animals and plants must also have been important in their diets.

Differences in occupations during this time period are discussed in terms of complexes which are defined on the basis of material cultural remains, primarily projectile points. Throughout the Paleo-Indian period, projectile points were lanceolate in overall form. During most of the period, workmanship on points was exceptionally good as evidenced by adherence to defined forms and to intricate and finely-executed flaking. The basal edges of most points made during this time period were ground so that there is a dull appearance which can be discerned visually and by touch.

The named Paleo-Indian complexes are listed below:

Clovis
Folsom
Agate Basin
Hell Gap
Alberta
Cody Complex
Fredrick
Lusk
Pryor-Stemmed
Lovell Constricted
James Allen
Angostura

The extent to which the occupants of southwestern Wyoming participated in any of these complexes is largely unknown, but most of the major complexes are at least represented in surface collections from the area. As examination of the radiocarbon curve makes evident, little excavation has taken place in Paleo-Indian sites and most of what we know about the era is extrapolated from elsewhere (e.g., Frison 1978).

The earliest occupations in the area are thought to be from the Clovis complex, but evidence to date is somewhat tenuous. The Union Pacific or Chicken Springs mammoth excavated from a spring southwest of Rawlins was radiocarbon dated to this time period, but no Clovis points were retrieved, and the cultural material recovered was in a doubtful context (Irwin 1971). One of the authors (Metcalf) has examined this location and there is a multiple component site surrounding the spring. At the proposed South Haystack mine a large obsidian base was recovered on the surface of a multiple component site, 48UT63 (MD-13). This base is exactly the size and shape of a Clovis, but has vertical thinning flakes rather than a flute (Metcalf et al. 1981). Other Clovis points may be present in local collections. The earliest date from the Pine Spring Site southwest of Green River is of Clovis age, but the date is not directly associated with any cultural complex (Sharrock 1966).

Good evidence of Folsom occupations does exist, however. A Folsom component is evident in the lowest level of 48UT60 (MD-10) at South Haystack. The site sits atop a sandstone outcrop overlooking a small draw and a larger open floodplain. The tang of a Folsom point and several channel flakes (the flake removed during fluting) were recovered from a well-defined cultural level (Metcalf et al. 1981:210). Frison (1978) reports a Folsom site northeast of Rock Springs, the Morgan Site, and a Folsom site is known on the Mud Springs Ranch south of Rock Springs. Finally, several surface finds of Folsom points from around Black Butte east of Rock Springs have occurred, including one from a professional survey (Metcalf 1975).

The Hell Gap complex is present at the Casper Site, a major bison kill near Casper (Frison 1974). Although slightly outside the area defined in this study, the site is mentioned because of its setting in a large parabolic sand dune. Many similar dunes occur in the major sand dune belt which runs across the southern portion of the study area. Hell Gap points are known from surface collections.

The Finley Site, located near Eden, Wyoming, is probably the major excavated Paleo-Indian period site in the study area. This site is the type site for the Eden point, a long narrow lanceolate style with a distinctive diamond-shaped cross section. This artifact is one of several Cody complex artifact types represented in the site. Investigations were conducted during the 1940s, and again later during the 1970s (Frison 1978:182-185). Bones of now-extinct bison, probably *B. bison antiquus*, were recovered in what was apparently a processing area, and in later excavations in a disturbed context in what may have been a kill area. Small herds of predominantly male animals were killed in mid-winter. Frison hypothesizes that these male groups were trapped after watering at a nearby spring, with sand dune topography used to impound the animals. Dates from the site are about 9000 radiocarbon years ago.

At 48UT60 (MD-10) in the South Haystack area a single Fredrick point was recovered in a stratigraphic context above the Folsom level. This level was poorly represented in the test units, and little else can be said about it. The date range for the Fredrick complex is about 7000-8000 years ago, but no date was retrieved from this site.

Reliable surface finds of Paleo-Indian period projectile points are too numerous to be easily tabulated. It seems clear, however, that some use of the area occurred throughout the Paleo-Indian period.

It is generally agreed that the transition from the Paleo-Indian big game hunting traditions to Archaic lifeways came about because of environmental changes which affected the availability of late Pleistocene megafauna such as the mammoth and the larger species of bison. The Archaic peoples who followed were hunter-gatherers who were adapted to a wider array of food sources within a more restricted geographical range. This is evidenced in the Wyoming Basin and in the northwestern Plains by the disappearance of the largest mammals from site faunas, the presence of smaller mammals in these faunas, and by an increase in ground stone milling tools. Varieties of deep basin roasting pits also become distinctive site features. These pits are usually interpreted to be associated primarily with vegetable processing. Several Early Archaic sites on the Plains are associated with bison procurement (Frison, Wilson and Wilson 1974; Frison 1970), but in the Wyoming Basin bison are absent from reported site faunas. Small to medium sized mammal remains are present, however, at Deadman Wash (Mackey 1982), 48UT370 (Miller 1982), and 48CR1946 (Sender et al. 1982), among others. Milling implements were recovered at a majority of Early Archaic sites, but not all, including some like 48UT375 where investigations were quite extensive (Angulski 1982). All of this evidence points toward a mixed subsistence.

Archaic

Ordering the prehistoric events of the Wyoming Basin Archaic was complicated until recently by lack of an adequate data base. This base is still somewhat sketchy, but is sufficient that a step can be taken toward a chronology which fits the data better than our present model of events. The Archaic time period, under any definition, lasted for thousands of years. The term archaic and the concept of an Archaic Stage is one which has seen much discussion in the archaeological literature. The definition used by Caldwell and Henning (1978:120) is an example: "Following Willey and Phillips (1958), we regard the Archaic as a cultural 'stage' representative of a fairly specific way of life, tool complex, subsistence orientation, and level of social organization". They go on to add that as a stage it has no temporal or spatial boundaries; rather it is "identified by cultural content wherever it is found and at whatever time" (Caldwell and Henning 1978:120).

Frison (1978:21) addresses this point also, but notes that the time span encompassed by this use of the Archaic is too long to be useful and "...some kind of temporary, trial, and arbitrary chronological model--one that can later be discarded without remorse--is needed purely for greater ease of reference". Frison also states that if the Archaic Stage is to be applied to the region, rigid time boundaries will become unworkable. As an example he notes that mountain and foothill oriented peoples were living an archaic lifestyle in late Paleo-Indian times, and some groups continued to do so until historic times (1978:22).

Viewing the Archaic of the Wyoming Basin as a cultural stage means that the range of dates for the period will run from slightly older than 7000 years to historic contact. It also means that at certain times and places, Archaic stage people were living with neighbors who no longer were Archaic in their lifeways. Frison solved this dilemma for the northwestern Plains by dividing the stage into three time periods (early, middle, and late), and ending his sequence with a Late Prehistoric period which in many ways continued to be archaic in terms of the way people lived. The same approach will be followed here, but with different time divisions to separate the events of the last 7000 years. The Archaic period is divided between Early and Late, and for each period, two sub-periods are described. These time divisions are termed "phases" following the terminology and definition provided by Willey and Phillips (1958:22).

The local radiocarbon sequence forms the basis for the divisions proposed here. Ideally, this sequence should be accompanied by detailed trait lists derived from these dated site components, and to some extent they are. At this time however, the formation of trait lists to accompany the dates is not very well advanced.

Figure 1 (described above) is a graphic illustration of the proposed revision of the Wyoming Basin cultural chronology. Radiocarbon dates in the column on the left may be correlated with the new proposed sequence for the area (first column under Temporal Units). On the extreme right, chronological sequences from the adjacent High Plains are presented for comparison.

The Early Archaic:

No evidence for a verh early Archaic stage, such as exists in the Great Basin, has been unearthed thus far. The Archaic begins with the Great Divide Phase, more or less 7000 radiocarbon years ago, and terminates about 5800-5900 radiocarbon years ago. The phase is named after the Great Divide Basin, an area where some of the sites dating to this time period occur. Sites in this period include 48UT372, located along the MAPCO pipeline south of the Riley Ridge corridors (Bleacher 1982). This site has been only partially excavated and appears to be a multi-component campsite. Some artiodactyl bone found in and around a hearth, which dated 6870± 120 years ago, comprises the extent of the material which can be attributed to the period.

Deadman Wash (Armitage, Creasman, and Mackey 1982) and Tenmile Draw (48SW1668) (Sall, Heffington and Creasman 1982), both located near Point of Rocks, also produced dates and materials assigned to the Great Divide Phase. At Deadman Wash a series of large, stemmed and side-notched projectile points are assigned to Component 3 which dates to this time period. Other cultural material from this component includes chipped and ground stone artifacts, some small and medium-sized mammal bone, and a variety of fire and roasting pits.

48SW1153 is a stratified campsite situated in eolean deposits in the Washakie Basin (Miller 1982). The lowest level of this site contained a hearth that yielded a date of 6310± 210. Very little diagnostic material was recovered from the level. Four dates from 48CR1946 are between 5800 and 6270 years ago (Sender et al. 1982). Associated cultural material is not exhaustively reported, but includes chipped and ground stone, and small mammal bone.

The second phase of the Early Archaic is termed the Green River Phase. It is separated from the Great Divide Phase mainly on the basis of the radiocarbon curve. There is a lag in date frequency at about 5800 radiocarbon years followed by a peak in date frequency which is not equaled again until the Late Archaic-Late Prehistoric transition. Artifact and other assemblages are too sketchy to provide strong support for any conclusions. Nineteen sites or site components have been dated to this time period, which runs from 5800 years to about 4800-4300 years ago. Some of these sites are very sketchily reported and others contained no diagnostic materials, so each known site will not be individually treated.

48UT375, a campsite on the MAPCO pipeline, had a very well preserved Green River level (Angulski 1982). In addition to several fire and roasting pits, the level contained chipped stone debris including a medium sized triangular side-notched projectile point. Overall artifact density was low and ground stone tools were absent.

48UT370, also on the MAPCO pipeline (Miller 1982), has an activity area dated to 5300 years. The feature is part of a larger double pit of unknown function that contained stained sand, numerous small retouch flakes, some bone fragment, and an undiagnostic biface fragment. Like 48UT375, ground stone was absent from the dated area of the site.

Deadman Wash (Armitage, Creasman and Mackey 1982) contains components falling into the Green River Phase. The late date for Component 3 of 5530±140 is in this range, and the side notched artifacts illustrated for Components 4 and 5 (the authors of the report describe these as zones rather than defined components) are also indicative of the period. Component 5 also appears to contain materials from later in the Archaic. Data on the paleo-environment presented in the reports on this excavation will be discussed later.

An important locality on the east edge of the study area is the Shoreline site, where some limited excavations have produced apparent pit house-like structures. The one which was excavated produced a hearth date of about 5200 years and a large side-notched projectile point (Frison 1978:44).

An interesting site from just south of the Riley Ridge area is 48UT63, where a human burial was dated at just over 5000 years. The burial was an older female interred with three ochre-stained metates. It was in quite fragmentary condition and no other cultural material was associated (Metcalf et al. 1981). Frison mentions another Altithermal era burial recovered from road construction north of Casper with dates of about 5300 years (Rl-543 and Rl-651) (Frison 1978:44).

A few sites dating between about 4300 B. P. and 5000 B.P. might also be assigned to the Green River Phase of the Early Archaic, but for the most part these dates come from hearths where little in the way of associated cultural material was recovered. The end of the Early Archaic is based on two lines of evidence: first, a drop in the per-century frequency of radiocarbon dates; and, second the presence in the area of McKean Technocomplex artifacts (Frison, Wilson, and Wilson 1976) in contexts dating 4500 B.P. to about 4100 B.P.

Middle Plains Archaic Manifestations:

The McKean Technocomplex is a term used by archaeologists to describe a series of projectile points with quite distinctive shapes and techniques of manufacture. There are several named variants of McKean series points: McKean lanceolate, a long narrow point, roughly leaf-shaped with a concave base; the Mallory point, similar in overall shape, but generally slightly wider, and distinguished by high, narrow side notches (Lobdell 1973); the Duncan point, a variant with rounded shoulders and an indented stem (Mulloy 1954); and finally, the Hanna point, a variant with a more triangular blade, sharp shoulders, and the distinctive indented stem. This complex is widely distributed over the northwestern and northern Great Plains where it dates from about 4900 B.P. to as late as about 3000 B.P. (Frison 1978:53-56). Its presence in the Wyoming Basin has been recognized for some time (Sharrock 1966), but there are far fewer known McKean Complex sites in areas removed from the Plains. Artifacts relating to this complex are also reported from the Colorado Plateau with a date range of about 4900 B.P. to 3500 B.P. (Holmer 1980:63-83).

Sites of the McKean complex on the Plains are often associated with bison procurement, and even where procurement is not a primary function, food bone scrap from bison is often found (Mulloy 1954; Metcalf 1974a). McKean Complex people were, as Frison demonstrates, quite accomplished hunters although gathering was also of some importance (1978:201-211).

Although McKean Complex tools appear in numerous surface collections from the Wyoming Basin study area, there are very few dated sites. The earliest is the Scoggin site, located in the far eastern part of the area northeast of Rawlins. This site dates to just over 4500 B.P. and comprises a bison kill where McKean lanceolate and Mallory point variants were recovered (Lobdell 1973). There are several McKean levels at the Lay site, a stratified campsite just north of the Yampa River in the southernmost part of the area. Dates range between 4300 B.P and 4100 B.P. (O'Neil 1980).

Level dates for the complex occur at three other stratified sites, but in more mixed assemblages. At Pine Spring on the west side of the Green River they occur in Occupation 2, which bears a 3600 B.P. date (Sharrock 1966:25). At Deluge Shelter in the Utah portion of Dinosaur National Monument, Hanna variants occur in a zone with two dates falling between 3200 B.P. and 3900 B.P. (Leach 1970). At Deadman Wash, McKean variants occur in Component 7, which dates between 2800 B.P. and 2100 B.P. These dates are quite late compared to other dated sites (Armitage, Creasman and Mackey 1982:4-8).

While the McKean Complex appears to have been the dominant influence on the Plains during the Middle Plains Archaic period, evidence from the western Wyoming Basin indicates a lesser influence. The Scoggin site is certainly a Plains-like manifestation of the complex, but its location is in an area where grassland is better developed than is the general rule in the study area. McKean complex peoples appear to have emphasized bison hunting to a greater extent than is indicated for the occupants of non-McKean Archaic period sites. It is possible that the less favorable bison habitat of the more desert-like areas of the Wyoming Basin restricted the effectiveness of this adaptation, or perhaps McKean artifacts or artifact styles were used by unrelated indigenous people. Whatever the true nature of McKean influence was, current data suggest that the artifacts of the "technocomplex" form only a small part of Archaic assemblages.

Late Archaic:

The transition from Early to Late Archaic is based mainly on the frequency drop in radiocarbon dates and occurred between 4600 B.P. and about 4300 B.P. (Figure 1). The period is further divided into two phases named after two of the major stratified sites where Late Archaic period levels occur. The Pine Spring Phase dates 4600 B.P to 2800 B.P., and the Deadman Wash Phase, from 2800 B.P. to about 1800 B.P. If frequency of radiocarbon dated components can be interpreted as reflecting population trends for the area, the period is one of fluctuating but fairly constant occupation. There are numerous sites which date to the period, but in many cases sites were only superficially investigated, and in others there is simply a paucity of cultural material associated with the dates. This discussion will summarize only the major sites.

The Pine Spring Phase is named for Occupation 2 of the Pine Spring site. This complex level or zone produced a wide range of chipped stone tools and some bone and ground stone artifacts. Food bone scrap included quantities of mountain sheep and some bison as well as a smaller quantity of medium and small-sized mammals. Projectile point styles are varied and there is considerable overlap in the distribution of styles between the three occupation zones at the site. In general, Occupation 2 point styles are medium-sized dart points, generally stemmed and broadly corner-notched. A bone date of about 3600 B.P. (Sharrock 1966) can best be interpreted as a very general age for the occupation zone.

Components 5 and 6 at Deadman Wash are undated, but stratigraphically should fall into this period (Armitage, Creasman, and Mackey 1982). Material culture remains included a variety of stemmed and notched dart points and ground stone artifacts. Faunal remains are difficult to assign directly to a component based on the report, but the general faunal periods used by the author indicate the presence of a variety of large and small mammals (Mackey 1982:166).

In Deluge Shelter, Occupation Level 11 dates about 3800 B.P. and Occupation Level 10, a level with some similarities, is thought to date about 3400 B.P. (Leach 1970:228-245). Perhaps the most distinctive feature of these levels is the occurrence of medium-sized dart points with corner notches resembling quite closely a number of specimens which have been recovered in the Wyoming Basin. Some of these specimens are assigned to the Elko Series of points, particulary the corner-notched type. Elko series points have a very long time span, about 7000 years, in the Great Basin chronology (Heizer and Hester 1978), but so far the

Wyoming Basin specimens have not been dated in enough contexts to reach a firm conclusion. Generally, medium-sized corner-notched dart points occur in post-Altithermal contexts, and are probably a better temporal diagnostic than is the case in the Great Basin.

An Elko corner-notched point occurs in 48SW1091, a site in the Point of Rocks area, in a level dated about 3900 B.P. (O'Brien 1982:75). This site is stratified, but all site components appear to the authors to be oriented toward plant processing. Ground stone is present in the level.

Cow Hollow Creek, a site in the Riley Ridge corridor area, bears two dates from Component 2 which fall on either side of 3400 B.P. No projectile points are associated with the component, but other chipped stone items and ground stone are present. Large, medium, and small-sized mammal bone is in the fauna (Schock et al. 1982).

Although several other sites in the region bear appropriate dates, material reported with the dates is too sparse to warrant individual discussion. The dates are generally from sites or components in which a feature could be dated, but little else occurred.

The subsequent Deadman Wash Phase begins about 2800 B.P. and continues until about 1800 B.P. The early date falls at a low frequency point in the radiocarbon curve, and it is followed by a continuous rise in date frequency. At Deadman Wash this phase is represented in Component 7, a complex component that yielded a variety of fire pit features, a possible structure evidenced by a pattern of post holes, a variety of projectile point styles, other chipped stone tools, ground stone, and a varied fauna (Armitage et al. 1982). This component has a series of five dates between 2900 B.P. and 2100 B.P. (Armitage, Creasman, and Mackey 1982:4).

In all likelihood, part of Occupation 2 at Pine Spring should be assigned to this period as well. There are strong resemblances among certain projectile point styles and in other site features as well. In addition, elements of Occupation 3 appear to be comparable. At Deluge Shelter, Occupation Level 8 is similar in that it has a wide variety of projectile point styles as well as other plentiful and varied material culture remains (Leach 1970:248-260). A single date from this complex (and probably mixed) level of about 3300 B.P. is early for this time period, but at least part of the material in this level is likely Deadman Wash Phase in age and relationship.

Evidence from less complex sites is also present. Component II at 48SW1091 has the same range of dates as Component 7 at Deadman Wash (O'Brien 1982:31). This component has a strong representation of chipped and ground stone artifacts including a fragmentary projectile point which may have been corner-notched. Several sites on the MAPCO pipline in or near the Riley Ridge corridors produced dates from this time period, including 48LN531 and 48UT375. Unfortunately, no cultural material is associated with these dates (Brock 1981; Angulski 1982). Other dated sites from this time period have a similar lack of information.

The Pine Spring Phase can be described as a period of relatively sporadic occupation of the area. Evidence from soils studies at Deadman Wash indicate the possibility of a period of increased aridity during part of this time period (Mackey et al. 1982:30). Evidence based on mid-Neoglacial advances after about 3300 B.P. (Currey and James 1982:40) may indicate that arid conditions had lessened by late Pine Spring times. Changes occurred in projectile point styles from the side-notched forms dominant in the Early Archaic to stemmed and notched varieties. Chipped stone is a major part of most site components although ground stone is also represented. McKean influence is present, but as previously stated, the nature of this influence remains a mystery. Both hunting and gathering appear to have been of importance in subsistence.

Evidence in the Deadman Wash Phase is somewhat difficult to interpret, but in general there is more date continuity, and there appears to be a more stable balance between hunted and collected foods. Projectile point styles throughout the Late Archaic are varied, but seem to tend toward medium-sized triangular dart points with corner-notching more consistent in this phase than previously. Soils and other paleo-climatic data indicate a generally favorable climate throughout the period, and well into the following Late Prehistoric period (Mackey et al. 1982:30; Currey and James 1982:40).

Late Prehistoric Period

In many ways this broad prehistoric period is a continuation of Archaic adaptations. A basic hunter-gatherer lifestyle continued through the period even though Fremont peoples to the south and west and Plains Woodland peoples to the east practiced a limited sort of horticulture. Current evidence suggests that no cultivation of domesticated crops occurred in the Wyoming Basin. Two lines of evidence suggest a rapid temporal shift between the Late Archaic and the Late Prehistoric periods. Radiocarbon evidence (Figure 1) shows a very dramatic increase in the frequency of dates beginning about 1800 years ago. This increase is followed by evidence for the acquisition of the bow and arrow in the area beginning about 1500 years ago, and by a few early dates on pottery from the next few centuries. Based on this evidence, an arbitrary date between 1800 to 1500 B.P. will serve as the temporal line between the Late Archaic and Late Prehistoric. The latter period lasted until more or less 300 years ago when European trade goods began having a profound influence on the area. The Late Prehistoric Period is divided into two phases: the Uinta Phase, which lasted until about 1000 B.P., and the Firehole Phase, which lasted until about 300 years ago.

As Figure 1 illustrates, there are numerous dates between 1800 B.P. and 1000 B.P. Dated components are far too many to discuss individually, so the discussion of the Uinta Phase will be more summary in nature than that of previous phases. Most of the dated components from the 300 years between 1800 B.P. and 1500 B.P. either lack diagnostic cultural material, are poorly reported, or are from stratified sites with some cultural mixing evident.

One of the earliest dates assigned to the Uinta Phase comes from Occupation Level 5 at Deluge Shelter. This date of 1625 B.P. is believed to be accurate for the level (Leach 1970:264-281). Materials in this and underlying Level 6 include a continuing wide variety of artifacts. Projectile point styles remain mixed, but there is a general diminution in the size of illustrated corner-notched points, and Rose Spring corner-notched points, a small triangular style with a small convex or rounded stem, become prominant. The general date range for this point type in the Great Basin is about 1300 B.P.-850 B.P. although there are some indications that it could occur earlier (Heizer and Hester 1978:163). Citing evidence from the Dry Creek Rockshelter in western Idaho, Webster

(1980:65) gives the point type a date of as early as 3300 B.P. and notes that it is well established in the stratigraphic sequence by 2400 to 1950 B.P. He believes this is evidence of a gradual increase in the use of the bow and arrow.

These dates and those at Deluge Shelter suggest that the use of the bow and arrow began in the Wyoming Basin area sometime prior to 1600 B.P. Points of the Rose Spring type are absent in illustrations from Deadman Wash, but are present in Occupations 2 and 3 at Pine Spring (Sharrock 1966:58). Unfortunately, it is not possible to closely date their occurrence at this site. Numerous Rose Spring points occur in the area in undated and later contexts.

Small, triangular, corner-notched points in some ways similar to Rose Spring specimens are also a common point type for the Uinta Phase. Near Black Butte to the southeast of the Riley Ridge area, a date of 1500 B.P. came from a shallow buried level at 48SW212 accompanied by six of these points. A few pot sherds also occurred in the activity area, but could not be tied directly to the area where the charcoal sample was taken (Metcalf 1975). A reliable early date for pottery comes from 48SW284, also near Black Butte, where a hearth in the midst of a scatter of some 133 sherds dated to 1300 B.P. (Metcalf 1975). Two small side-notched points which would fall into the Desert Side Notched type in the Great Basin also occurred in the scatter. Pottery and small projectile points of the three general styles occur throughout the remainder of the Uinta Phase in many dated contexts.

Ground stone artifacts and the occurrence of charred seeds in the floated fill of fire pits from some sites indicate the importance of gathered plant foods throughout the time period. There is also ample evidence that hunting was of importance. One of the major sites of the area is the Wardell site, a bison kill located near Big Piney, within the area of interest for Riley Ridge. This site is a bison trap and associated processing area where a series of autumn trapping events took place over a fairly long span of years. Dates range from nearly 1600 B.P to just under 1000 B.P. (Frison 1973:74). Projectile points recovered from all levels of the site are remarkably uniform is appearance, with low side notches and concave bases. They are somewhat atypical for the area and their occurrence is still unexplained. Pottery was also recovered from the kill area of the site.

Although bison bone does show up in other sites, Wardell is thus far unique for communal bison procurement in the Late Prehistoric period. Several sites demonstrate communal pronghorn kill events or intensive use of antelope. Reiss and Sanders (1982) have succinctly summarized the evidence for antelope utilization in the area. Seven Green River Basin sites evidence antelope utilization: Oyster Ridge (Zier 1982) and 48UT390 (Reiss and Sanders 1982) date to the Uinta Phase; Firehole Basin is assigned to the Firehole Phase (Metcalf and Treat 1979); Eden-Farson is Protohistoric in age (Frison 1971); the Bridger Antelope Trap is also possibly Protohistoric (Frison 1978); and two other sites are as yet undated. Communal hunting is well documented as part of the lifestyle in the Late Prehistoric period.

By about 1000 years ago, A.D. 950, the frequency of radiocarbon dates in Figure 1 plunges to the fairly low levels of the Late Archaic. Other than the drop in date frequency, which quite likely represents a drop in prehistoric population, there are no remarkable changes in the prehistoric record. In general, the Rose Springs series of points disappears, as does the small corner-notched style. Small side-notched points, present in the Uinta Phase, become dominant and similar small points with side and basal notches (locally termed tri-notch points) come into use. Pottery continues to be represented, but earlier and better made pottery types are less frequently found and Intermountain Ware (Mulloy 1958), a type also referred to as "Shoshonean", becomes dominant. A smattering of Fremont pottery occurs as do traces of Southwestern Puebloan wares. Stone circle sites occur in mostly low numbers throughout the study area and most are thought to be Late Prehistoric in age. This period is termed the Firehole Phase after Firehole Basin 11, an antelope processing site which also has small side-notched projectile points and ceramics represented. Separate areas of the site produced similar dates of 645-625 B.P. (Metcalf and Treat 1979).

Other sites such as 48CR341 (Metcalf 1981), 48SW2302 (Tucker 1982), 48SW1153 (Miller 1982), and 48UT194 (Bleacher 1982) are small, limited activity sites representative of activities such as lithic procurement and maintenance, plant processing, and short-term camps. Levels at the major stratified sites contain mixed deposits from this time period as well.

A number of aspects of the Late Prehistoric sequence remain as problems. Some of these problems require re-examination and synthesis of existing data, and others will require further field work. One of these is the boom-and-bust evidenced for the period in the radiocarbon data. Paleo-environmental data from Deadman Wash (Mackey et al. 1982) and elsewhere indicate a period of increased aridity and erosion after about

650 B.P. which might work as a partial explanation, but this decline evidently began in advance of climatic deterioration. Also, until recently investigators have been confident in the diagnostic qualities of Late Prehistoric artifacts and there is probably some research bias against submitting dates from sites with these diagnostics. Recent interest in fine-tuning the late chronology has probably done much to offset this earlier bias, however.

Another problem which can be partially addressed is the nature of prehistoric influences between the eastern Great Basin-northern Colorado Plateau area and the Wyoming Basin in the Late Prehistoric in general, and more specifically in relation to the development of the Fremont. Mackey et al. (1982:54-62; see also Schroedl 1976) present radiocarbon data for a wide area surrounding the Wyoming Basin. The high frequency of dated components reflected between 1800 B.P.-1000 B.P is a regional phenomenon. It reflects relatively high indigenous populations over a vast contiguous area reaching from the prairie-plains ecotone of Iowa to Utah. The data from northwest Colorado and Utah are of particular interest since the areas are contiguous and because the differences in the patterns of dates in the Late Prehistoric are negligible between the three areas. The similarity of these patterns is alone suggestive of similarities in cultural developments, but other similarities also exist.

Early in the Uinta Phase, the Rose Spring projectile point style was important. Later in the phase, Fremont artifacts, primarily ceramics, find their way into Wyoming Basin assemblages (e.g., Sharrock 1966). Marwitt, in a summary of Fremont (1970:150), gives a range of dates of about A.D. 520 to A.D. 920 (roughly 1400 to 1000 B.P.) for the Uinta

Fremont and up to about A.D. 1300 for the Fremont in general. This range of dates corresponds to much of the Uinta Phase. All of this evidence suggests that Fremont influence, if not Fremont people, were important to the Uinta Phase of the Wyoming Basin.

Protohistoric Period

In the Wyoming Basin the Protohistoric is the period of time when Europeans were present on the continent and Euopean artifacts and ideas were present, but Europeans themselves had not reached the area. This period was roughly 300 years in length and ended in the early 1800s. Surface finds of European trade goods are fairly common in the Wyoming Basin, but systematically investigated sites from this time period are rare. Eden-Farson, an antelope processing and camp site, is dated to this period. Although there is an absence of trade goods, the site is dated at just 230 B.P. (Frison 1971). There are numerous informative aspects of Eden-Farson, but one of the notable ones is the very late occurrence (A.D. 1720± 100) of prehistoric patterns practiced over thousands of years.

Another site, Skull Point (McGuire 1977) dates to this time period with an age of about 300 years B.P. This site is a multi-activity camp including a rock-art panel that is probably contemporaneous with the dated site component. The panel is dominated by a "Shoshonean" shield figure. Other rock art panels are conclusively Protohistoric and historic in age. Several panels north of Rock Springs (unpublished) depict stick figures on horses, with some of the figures carrying rifles. Love (personal communication 1976) has described a panel in the LaBarge area which is apparently aboriginal and depicts a train.

During the period of early exploration, references are made primarily to the Shoshone or Eastern Shoshone as the occupants of the study area. These references have been researched by Cowie (1958), who summarizes European contacts with the Shoshone during the historic period and also discusses inter-tribal contacts. Throughout this time the Shoshone are the principal group, but the Comanche (close relatives of Shoshone), Flathead, Crow, Arapahoe, Gros Ventre, Cheyenne, and the Sioux are known to have encroached on the territory for raiding, hunting, or trade.

HISTORIC NARRATIVE

Introduction

This overview considers the historical themes, events, persons and places of an area in excess of 3,000 square miles in 85 townships of Lincoln, Sublette and Sweetwater Counties, Wyoming. The study area does not comprise a single block area, but extends 72 miles east to west and 78 miles north to south. This overview, therefore, includes historical information about a much larger region than the actual study area proper. Information about specific historical sites is limited to the study area, however, which forms a rough triangle with corners at Rock Springs, Kemmerer, and Pinedale.

This overview is intended to serve certain specific functions in relation to management of historic period cultural resources, in particular those resources which may be impacted by the Riley Ridge Project. It is intended to provide a general statement of the major historical themes, eras, and events of the study area, with reference when possible to specific persons, places or objects having important associations with area history. The overview should provide some basis for prediction of the possible existence, locations, and physical nature of historic period resources, and a context for evaluating the significance of individual sites or groups of cultural resources.

The historical statement presented here should not be considered to suffice as a complete background narrative for Class II or III cultural resources investigations. The vast area involved, the richness and diversity of history in that area, and the restrictions of scope of effort appropriate to an EIS limited the present effort to consultation of mostly secondary sources. Except for a brief reconnaissance of the Lander Cutoff through the well field, field verification of site information was not conducted and possible informants about area and local history were not interviewed. Field efforts and the consultation of county records are usually included in Class III inventory activities.

The main purpose of the present overview is to present information, rather than offer interpretations of history. Previous historical overviews exist for parts of the study area, and those reports have been drawn upon heavily wherever possible. This narrative is presented in a thematic format corresponding to the major divisions or themes of the history of southwestern Wyoming. Thematic organization allows maximum usability of the overview for evaluation of specific historical sites and allows maximum ease in amendment of the overview as information is generated by subsequent efforts.

Exploration and Sovereignty

In large measure, the historical importance of the region resulted from geographic, topographic, and climatic factors. The only major drainage in the region is the Green River, a tributary of the Colorado River. The Green River and its branches, Hams Fork, Blacks Fork, Big Sandy River, Fontenelle Creek and La Barge Creek, are key features in the historical geography of southwestern Wyoming. The region is also near the headwaters of four other major drainages--the Snake River to the Columbia and the Pacific Ocean; the Wind/Big Horn River to the Yellowstone, Missouri, Mississippi and Gulf of Mexico; the Sweetwater to the North Platte and Missouri; and the Bear River to the inland drainage of the Great Salt Lake.

The Green River drainage is one of several relatively low basins in the intermountain region which have served as migration and transportation corridors since prehistoric times. A northern corridor followed the North Platte and Sweetwater Rivers, crossed the Continential Divide at South Pass, continued northwestward along the Wind River or somewhat farther south to the headwaters of Green River, and then again northwestward over a pass to Hoback River. In later years the route would course to the southwest after crossing South Pass and then would splinter into several trails, heading west and southwest. The latter trails were collectively known as the Oregon Trail. A southern corridor passed over the southern portion of the Laramie Plain, northwest to Elk Mountain, westward across the Continental Divide at Bridger Pass, and across the Red Desert to the Green River. This route became known as the Overland Trail and was later followed closely by the Union Pacific Railroad (Larson 1965:9-10; Murray, Wottage and Bessette 1976:3-4).

The study area has a complex history of sovereignty. The area to the south of the 42nd Parallel, which runs east to west through the approximate center of the region, was Spanish territory until the Mexican Revolution in 1821. That area remained Mexican territory until ceded to the United States in 1848. Thereafter these lands were part of Utah Territory from 1850 to 1863, Idaho Territory from 1863 to 1868, and Wyoming Territory from 1868 until statehood in 1890. The lands to the north of the 42nd Parallel were claimed by both Britain and Spain until 1818, were in joint British-United States occupancy from 1818 to 1848, Oregon Territory from 1848 to 1859, Washington Territory from 1859 to 1863, Idaho Territory from 1863 to 1868, and Wyoming Territory from 1868 to 1890 (Murray, Wottage and Bessette 1976:25-26; Rosenberg 1982a:2-3).

Although Britain and Spain claimed earliest sovereignty over the study area, there is no known evidence that representatives of either nation explored the region prior to penetration by parties from the United States. In 1776 the Spanish Escalante expedition discovered the Green River, but apparently did not travel into present Wyoming; the Green River would be first known as the Spanish River. In 1807 John Colter, a citizen of the United States who had been a member of the Lewis and Clark Expedition, travelled through the Bighorn River and Yellowstone Park areas, but apparently did not cross into the Green River drainage. British fur traders are known to have entered the Green River drainage at least once, in 1817, before the annual Rocky Mountain fur trade rendezvous were begun in 1825 (Haines 1977:35-38; Rosenberg 1982a:3; Murray, Wottage and Bessette 1976:8).

Wilson Price Hunt led the first Euro-American penetration of the region in September, 1811. Hunt's party of fur trappers ascended the Wind River and crossed the divide into the valley of the Green River. The party then crossed a divide to the Hoback River, which they descended to the Snake River.

In the spring of 1812, Robert Stuart led a return party from Astoria on the Pacific. Stuart entered the Bear and Salt River drainages and then moved to the Snake River near the present Idaho-Wyoming border. After having their horses stolen by Indians, the party traveled over a pass in the Tetons to Jackson Hole, then to the headwaters of the Green River. They then apparently skirted the Wind River Range, crossed the divide near or at South Pass to the Sweetwater, and continued to the North Platte. The Stuart Party is given credit by most authorities with first use of much of the route of the later Oregon Trail east of South Pass (Stone 1924:26-29; Chittenden 1902:182-214).

Documented exploration of the study region began in 1823 with the expedition led by William A. Ashley in search of the mythical river Buenaventura, which was thought to drain into the Columbia River. Ashley's men explored the Green River drainage and crossed to the Bear River Valley, possibly by ascending Ham's Forks. Etienne Provost, a member of the party, may have been the discoverer of the Great Salt Lake. According to one authority, Provost probably followed the Green River to Blacks Fork, ascended that stream, and crossed an easy pass to the upper Bear River (Dale 1941:98-100; Chittenden 1902:271). In 1824 Ashley pioneered Euro-American travel over what would become the Overland Trail to the Green River (Murray, Wottage and Bessette 1976:9).

The number of men and parties engaged in the fur trapping and trading industry in the Green River region increased rapidly after 1824, and exploration obviously continued, but there are few indications of when and by whom the physical features of the region were discovered. The names of streams recall some of the mountain men, however: Fontenelle Creek, named for Lucien Fontenelle but originally called Clyman's Fork for James Clyman; La Barge Creek for Joseph M. La Barge, a trapper who was killed by Indians on that creek in 1825; Hams Fork for Zacharias Ham, an Ashley party trapper who may have drowned while trapping on the lower Colorado River in California (Housley, Pfaff and Vasey 1977:XIII-XVI; Antilla and Antilla 1975:1; Clyman 1960:37).

William L. Sublette, for whom the county and the variant route of the Oregon Trail were named, also was an Ashley party member. Sublette's name was applied in several early maps to trails across the desert from South Pass to the Green River and farther, although these routes and the general region were probably known as well by other mountain men like Jedediah Smith. As early as the 1820's and probably at least by 1832, Sublette had crossed the desert either on the route that would become the Sublette-Greenwood Cutoff or the approximate route that would become the Lander Cutoff of the Oregon Trail. A map published in 1840 may have shown both routes under the title "Sublette Route" (Jensen 1975:51-52; Scott 1958:27-28; Burr 1840).

Accurate mapping and description of the upper Green River region began with the explorations of John C. Fremont in 1842 and 1843. Fremont's expeditions were a continuation of efforts by the United States Government to gain knowledge of the western territories of the United States and of some territories that were not yet under American sovereignty. The examination of the Green River region had special importance however: beginning in 1834 American missionaries and other settlers had trekked through the region to Oregon. In 1841 a small caravan of emigrants traveled overland to the Pacific, and it became apparent to some government officials that a migration would and perhaps should take place.

Fremont's expedition followed what would become the Oregon Trail over South Pass and then went into camp on the Big Sandy River. Fremont and a smaller party left this camp and explored the upper tributaries of the Green River and the Wind River Range. In 1843 Fremont explored and mapped the territory along the main Oregon Trail, from South Pass to the Big Sandy, southwest to Green River, to near Fort Bridger on Blacks Fork and eventually to Walla Walla, Washington. Charles Preuss, the topographer of the expedition, drew seven sheets of maps which were rushed into print by the government and were used extensively by emigrants for the ensuing half century (Murray, Wottage and Bessette 1976:57; Lavender 1968:100).

The swelling tide of emigration to the Pacific and continuing conflicts with Great Britain and Mexico over control of the western territories compelled Congress to further investigate and protect the Oregon Trail. In 1846 Congress authorized establishment of military posts along the road and appropriated funds for, among other things, the equipping of a regiment of mounted riflemen for deployment on the trail. The regiment was diverted to fight in the Mexican War of 1846-1848, but in 1849 they travelled the length of the Oregon Trail, including the Sublette Cutoff, through the Green River region. Information collected by the officers of this detachment supplemented Fremont's report and maps, but perhaps more important was the initial showing of American armed force through the region (Settle 1940).

In 1848 Congress also appropriated funds for surveying wagon roads from the edge of settlement in Missouri to the far side of the Rockies. Captain Howard Stansbury in 1849 led a small surveying party over the Oregon Trail to Fort Hall, in present Idaho, and then turned south to Salt Lake City. The next year he sought a shorter route between Fort Bridger and the North Platte than the South Pass-Big Sandy-Green River route. With Jim Bridger as guide, the party struck eastward from the Green River near Granger, over the Continental Divide at Bridger Pass, around the end of the Medicine Bow Mountains and on to the Laramie Plains. The Stansbury party had found, or refound, and mapped the Overland Trail route and also a reasonable route for a transcontinental railroad (Lavender 1968:110-111).

The laying out of the Lander Cutoff was probably the most extensive surveying operation in the upper Green River Valley prior to General Land Office surveys. In 1857-58 Captain Frederick West Lander was directed by the Department of the Interior to assess the existing routes between South Pass and California, or to establish a more direct and feasible route, if possible. Lander split his party into several groups who combed the desert and the mountain ranges to the west for possible wagon routes. Lander himself reportedly travelled 3,000 miles on horseback in three months of 1857. Lander's maps and report greatly increased the available information about the study region (Lander 1857, 1861a, 1861b; Stone 1924:64).

Other topographical and geological surveys were conducted after 1860, but these are of relatively minor historical importance. Surveys for the Union Pacific Railroad were conducted to the south of the study region in 1864. John Wesley Powell set off on his two voyages down the Green and Colorado Rivers from Green River City in 1869 and 1871 (Bartlett 1962:246, 286). Cadastral land surveys were begun in the region in 1881, but were not completed for some townships until well after 1900, and then frequent errors resulted in resurveys until 1927 (U.S. General Land Office).

The history of the region of the Riley Ridge Project includes most of the major themes of the history of the American West. The region was the scene of major events and activities of the fur trade, overland emigration, open range ranching, the Pony Express and overland freighting, transcontinental railroad construction, and both early and modern energy production. The region was conspicuously not prominent in the themes of Indian-White conflict and precious metal mining, although sites important to those themes are not far removed from the area.

The Fur Trade

The historic period in the region began with the penetrations and explorations of the Pacific Fur Company. New York entrepreneur John Jacob Astor organized the company in 1808, and in 1811 he put in motion an ambitious scheme to exploit the rich fur and pelt resources of the Rocky Mountains and Pacific Northwest. Astor outfitted Wilson P. Hunt to lead a party overland from the Missouri River to the mouth of the Columbia River, where he would meet a second party who had been transported by sea. Hunt ascended the Wind River and crossed the divide into the upper valley of the Green River in mid-September, 1811. He then crossed another divide to the Hoback River, which he followed to its mouth on the Snake River, then descended the Snake to the Columbia. Hunt left a party of four trappers to winter in the area near the mouth of the Hoback River (Chittenden 1902:182-214).

Hunt's party was guided through the Wind River-Snake River region by three trappers who had been with Andrew Henry's Missouri Fur Company expedition to the headwaters of the Missouri River in 1810 and 1811. The three had apparently left Henry's Fort on the Snake and descended the Wind River and crossed to the Missouri River in the spring of 1811. Robert Stuart retraced much of the western portion of this route on his return from Astoria on the Pacific in 1812, but went farther south and probably crossed South Pass. Stuart and the party then continued down the Sweetwater and North Platte Rivers (Chittenden 1902; Phillips 1961:226).

Although the region had been penetrated and somewhat explored, the American fur trade would not really begin there until 1824. The Pacific Fur Company could with difficulty contend with problems of transportation, Indian hostility, and competition from the British North West Company in the Columbia drainage. The American company could not match the military strength of the British, however, and when war broke out they were forced to sell their entire Columbia river stocks to the North West Company in 1813. The American fur trade in the west largely retreated to the Missouri River for more than a decade.

After the purchase of Astoria, the North West Company began pursuing the furs of the Snake River drainage, only to be driven out by the Snake Indians. In 1818, however, Donald McKenzie led a brigade of trappers up the Snake and then crossed over to the Green River. McKenzie found "a rich field of beaver" as well as abundant other game and wild horses. The party also apparently explored the Tetons and part of the Yellowstone Park area. It may have been the British, then, who actually opened the fur trade of the upper Green River (Phillips 1961:304; Haines 1977:38-39). The 1818 expedition appears to have been the only penetration of the region by British trappers or traders until after the American fur companies were firmly entrenched and were meeting in annual rendezvous.

In March, 1822, William H. Ashley organized the Rocky Mountain Fur Company in St. Louis, Missouri. Following a rather unsuccessful attempt to trade at the mouth of the Big Horn River in 1823, Ashley's party headed southwest and eventually came to the Green River. Among Ashley's party were men who would become legends in the American West: Jim Bridger, Jedediah Smith, James Beckworth, and William Sublette. Parties of this expedition explored the Green River drainage and ranged as far as the Bear River to the west and the Great Salt Lake to the south. They probably ascended the tributaries of the Green, especially Hams Fork, Blacks Fork, Fontenelle Creek and La Barge Creek. Recollections of trappers James Clyman and James Beckworth mention work on Horse Creek and La Barge Creek but one authority has the supposed reference to La Barge Creek meaning one of the Beaver Creeks in Sublette County. In the summer of 1824 a group led by Jedediah Smith explored to the north of the headwaters of the Green, into the Tetons and Jackson Hole (Clyman 1960:37; Dale 1941:98-100; Chittenden 1902:217; Haines 1977:39).

The far reaching explorations by the Rocky Mountain Fur Company were the product of an innovative system of supply invented by Ashley. The fur packs were not only generated by brigades of white trappers, but those trappers also had no fixed base of operation or fort. The trappers would be supplied with provisions and other goods by the fur company in the field, thus eliminating loss of trapping or trading time resulting from travel to and from trading posts. The first rendezvous took place in July of 1825 on Henrys Fork above the confluence with the Green River, to the southwest of the study area. This meeting included only members of Ashley's company and 29 deserters from the Hudson's Bay Company. Later rendezvous would include rival fur companies, rival suppliers, and hundreds of Indians of different tribes and bands (Gowans 1976:5-16).

From 1825 to 1840 at least one rendezvous was held in the intermountain area. The meetings of 1826, 1827, 1828, and 1831 were held either on Bear Lake on near Bear River in what is now northern Utah. In 1829 and 1832 the annual fairs were held at Pierre's Hole, to the northwest of Jackson Hole. In 1829 (two rendezvous were held in that year), 1830, and 1838 they were either on the Pogo Agie River or at the point were that stream and the Wind River converge, to the northeast of the study region. The rendezvous of 1833, 1835, 1836, 1837, 1839, and 1840 were held at a number of sites on the Green River above and below the mouth of Horse Creek, near the present village of Daniel. Also near Horse Creek was the short-lived trading post Fort Bonneville, sometimes called Fort Nonsense, built by Captain Benjamin L. Bonneville in 1832. All of these sites are slightly to the north of the study region (Gowans 1976).

In 1834 the rendezvous was held on Hams Fork, and actually in at least four locations up to 14 miles above the mouth of Hams Fork. The American Fur Company established its camp very near the mouth, just upstream from the present town of Granger. Upstream from the confluence about five miles was the camp of the Rocky Mountain Fur Company under Thomas Fitzpatrick, and with them the camp of packer and supplier William Sublette. This camp was moved to a point eight miles above the mouth of Hams Fork on June 18, 1834, to afford better grazing for horses. Nathaniel Wyeth's camp was about 14 miles above the mouth of Hams Fork and about two miles below the mouth of Cow Hollow Creek. When the rendezvous began breaking up on July 12, the remainder of the Rocky Mountain Fur Company camp moved up the Hams Fork some 15 to 20 miles, where it was joined by the American Fur Company group on July 20 (Gowan 1976:123-150). Although the rendezvous were events including hundreds of people and tons of trade goods, none of the locations of these camps have been verified by the discovery of physical remains (Gowans 1971).

By 1835 the best years of the Rocky Mountain fur trade were past. Declining numbers of beaver as the result of trapping, the high costs of goods transported from Missouri or Sante Fe, and the large numbers of competing trappers made profits hard to come by in the last years of the annual rendezvous. After 1840 the number and magnitude of fur trapping enterprises in the intermountain area decreased rapidly and the American Fur Company and its successor Pierre Chouteau, Jr., Company held the lion's share of the business. There were other means of income for men who knew the county, however, arising from the growing tide of emigration.

Overland Emigration and the Trail Heritage

The 1834 rendezvous at Hams Fork included the first participants of a new era in the region's history, the overland emigration. Traveling with trader Nathaniel Wyeth were Jason and Daniel Lee, Methodist missionaries intent on serving the Whites and Indians west of the Rockies, especially the Flatheads and the Nez Perces. In 1835 the American Board of Foreign Missions sent Marcus Whitman and Samuel Parker to the rendezvous at the confluence of Horse Creek and Green River, and the next year Whitman led the first emigrant group across South Pass and Green River and on to Oregon. In the next six years, 1835-1841, small bands of missionaries and settlers followed Whitman's route, which became the main Oregon Trail. In 1841 the combined Bidwell-Bartleson party was the first known major wagon train to travel the trail to California and Oregon by way of Fort Hall (Scott 1950; Murray, Wottage and Bessette 1976:29).

In the winter of 1842-1843 Whitman returned to Washington, D.C., to impress upon the government the need for settlement by Americans in order to cement the claims of the United States to the Oregon territories. He was more successful in raising interest of private individuals than the government, and in 1843 he led an emigrant train and about 1,000 head of stock over the trail to Oregon. Emigration over the trail quickly increased: in 1844 about 1,500 persons used the trail, and about 3,000 persons in 1845. In 1847 an estimated 4,500 persons went over the trail to California. It is estimated that 300,000 persons followed the Oregon Trail and its variants westward in the years 1842-1890. In 1858 alone some 12,000 persons are known to have traveled the trails westward (U.S. Congress 1859:House Executive Document 108; Murray, Wottage and Bessette 1976:30).

From South Pass the main Oregon Trail led westerly for more than 30 miles over a desert basin to the Big Sandy River near present Farson, Wyoming. The trail then coursed to the southwest, parallel to the right bank of the Big Sandy, to the Green River. The crossing of the Green was made at one of a number of ferries that developed about three miles above the junction of the Big Sandy and Green rivers. The road then continued southwestward and crossed Blacks Fork at least twice before arriving at a low divide leading to the Bear River Valley. The trail turned northward along the Bear River and northwestward to the Snake River at Fort Hall, Idaho (Jensen 1975:10-11).

The increasing travel over the Oregon Trail induced veteran trapper Jim Bridger to open a trading post on the original trail route. Bridger's fort was first located on the Green River below the mouth of Sandy Creek in 1841, but was rebuilt on Blacks Fork to the west of the mouth of Hams Fork in 1842. Fort Bridger was built primarily to serve the emigrant trade, but also did some business with the Utes and Shoshones. The post was a major point of supply and recuperation for emigrants almost from its beginning. Bridger operated that post until 1855 when he sold it to the Mormon Church. The federal government re-established the site as a military post in 1857 after the Mormons burned it during their scorched-earth retreat, and it remained active until 1890 (Gowans and Campbell 1975).

Although the original or Fort Bridger route of the Oregon Trail followed easy grades and offered fair water and grazing throughout its distance, it made a long V-shaped jog to the south after leaving the Big Sandy River. To many emigrants this route seemed to include an unnecessary detour and meant an extra three to four days on the trail. In 1855 Caleb Greenwood, a seasoned mountain man, guided an emigrant train along the established route to a point six miles southwest of the crossing of Dry Sandy Creek, but from there the train headed almost directly west while the old route continued southwesterly. The new route, soon to be known as the Greenwood or Sublette Cutoff, forded the Big Sandy River about nine miles north of present Farson and then crossed the Little Colorado or Green River Desert to Green River.

The crossing of the Green River really could occur at several locations from six to fifteen miles south of present La Barge. By 1849 there were several ferries operated at these crossings by Mormons, former fur traders, and parties of emigrants who saw a means of turning a quick, if not easy, profit. The famous Names Hill, which bears hundreds of emigrant inscriptions, is on the west side of the Green River near at least one popular ferry site. Several of the lower ferry sites apparently were inundated with the filling of Fontenelle Reservoir (Jensen 1975:41, 50,126-128).

From the crossings of the Green River the various splinter trails eventually converged and headed south to cross over Holden Hill and descend to Fontenelle Creek. A second trail apparently left the lowest crossing of Green River and headed more directly west, to meet the main trail at the foot of Holden Hill. The route then ascended the creek for three to four miles before crossing and heading west and southwest to the Hams Fork. A prominent campsite on this segment was the Pine Grove, which is located near the source of Willow Creek (Jensen 1975:183-185). From the Pine Grove the trail continued westward over Slate Creek Ridge, Slate Creek, and on to a notch in Oyster Ridge called Rocky Gap. West of Rocky Gap the trail again splintered, with several trails heading generally southwestward to the Hams Fork. In later years the Dempsey-Hockaday trail would continue almost directly west to meet the Sublette Cutoff again at a crossing of Dempsey Ridge (Rosenberg 1981).

The Sublette Cutoff grew slowly in popularity until 1849, when the saving of three to four days time became important to the average emigrant headed for the California gold fields. The route had a major disadvantage over other routes in that it was the "Dry Drive", the waterless crossing of up to 75 miles of desert between the Big Sandy and Green Rivers. In 1852 two variants of the Sublette Cutoff were established which decreased the length of desert crossing. The Kinney Cutoff left the Bridger route about seven miles northeast of the Lombard Ferry and coursed west for about 18 miles to the Green River. The crossing of the Green River was at what became known as the Kinney Ferry, about seven miles downstream from the mouth of Slate Creek (Jensen 1975:72).

A second trail variant, known as the Baker and David Road, left the Kinney Cutoff near the midpoint of the desert crossing. It then headed northwest for a mile, turned southwesterly, and paralleled the Kinney Cutoff from three to five miles away. This trail met the Green River about a mile north of the mouth of Slate Creek, and forded at a site known as the Davis-Case Ferry. After leaving the Green River, the two trails passed up both sides of Slate Creek for some 10 miles, where they converged into what is known as the Slate Creek Cutoff. The trail then ascended Slate Creek to a merger with the Sublette Cutoff just east of Rocky Gap (Jensen 1975:73; Murray, Wottage and Bessette 1976:33).

By 1850 the Sublette Cutoff and its variant trails were receiving far more traffic than the old Fort Bridger route. As indicated above, some of the ferries across the Green River were run by members of the Church of Jesus Christ of Latter Day Saints, the Mormons. In 1847 the first advance group of Mormons had reached Fort Bridger before passing westward to the Great Salt Lake. In the next several years thousands of Mormons would pass into the Great Basin, lured there in part by the positive pronouncements of J. C. Fremont of 1843. By 1857 the settlements had spread from the Great Salt Lake as far as the lower Green River and the middle Bear River, and Brigham Young ruled a state called Deseret. Although there was some attempt to keep Mormon emigrants separate from others, the "Mormon Trail" followed closely the general Oregon Trail in many places. Members of the church established ferries and way stations along the route both as aids to Mormon travelers and as business enterprises: Hiram Kimball of the B. Y. Express Company of Salt Lake City secured a government contract to haul mail between Missouri and Salt Lake City in 1856, and these stations took on a dual role.

The Mormons operated their settlement according to their own beliefs and organization, and friction arose after 1855 between their leadership and civil territorial appointees selected by the Administration in Washington, D.C. In 1857 the conflict broke into armed confrontation and Brigham Young called out his militia to defend his settlements and authority from a perceived unjust invasion by the U.S. Army. Although the conflict never reached a point of open warfare, the government did send an expedition under Colonel Albert Johnson, accompanied by supply trains operated by the firm of Russell, Majors and Waddell. Captain Van Vliet preceded the main army and established Camp Winfield about 15 miles up Hams Fork from Blacks Fork.

Having burned Fort Bridger on their retreat, the Mormons struck against the government supply trains at Simpson Hollow, located about two miles west of the mouth of Big Sandy Creek. The raiders avoided bloodshed, but looted and burned 52 wagons containing vital supplies for the army troops. Johnson made his main camp and remained the winter of 1857-58 at Camp Scott, about two miles downstream on Blacks Fork from Fort Bridger. Stock tending camps of this expedition were widely spread, including some in the Hams Fork Valley. Fort Bridger was maintained as a military post until 1890, mostly as protection for communications over the Oregon and Overland Trails (Stone 1924:69-71; Gowans and Campbell 1975:109-118).

In early October of 1857, Colonel Edmund Alexander left Camp Winfield with a column seven miles long and proceeded up Hams Fork. Alexander's plan was to follow an old trapper's route up Hams Fork, across to the Bear River and then down into Utah through valleys unprotected by Mormons. About 35 miles upstream from Camp Winfield, Alexander's column was hit by a snowstorm and falling temperatures. The column was harassed by Mormon raiders and an estimated 3,300 head of cattle were lost due to starvation, cold, and Mormon depredations. On October 25, 1857, the column was recalled to rendezvous with Colonel Johnson below Fort Bridger, and apparently retraced its route down the east side of Hams Fork (Gowans and Campbell 1975:103-105).

By the end of 1858, relative normalcy had been restored to the area and freighting along the trails had been resumed. Overland mail service between Fort Laramie and California had begun as early as 1848, but major passenger and freight service on this route really began with federal contracts awarded to J. M. Hockaday in 1858-1860, and the Overland California and Pikes Peak Express Company beginning in 1860. Also in 1860 the firm of Russell, Majors and Waddell organized the Pony Express to rapidly carry mail along the route. A series of relay stations was set up along the route, which generally followed the original Oregon Trail through the Hams Fork vicinity. One such station was called Ham's Fork Station, but it was apparently located on the Blacks Fork, at present Granger, Wyoming. Although the Pony Express was abondoned in 1862, the Overland Stage and other freighting trains, as well as emigrant trains, continued to use this route and stations until the completion of the Union Pacific Railroad in 1868 (Murray 1979:39-42; Urbanek 1967; Johnson 1874).

In part due to the need to maintain communications and move troops across the mountains and deserts, Congress in 1857 appropriated funds for the construction or improvement of wagon roads from Nebraska to California. Frederick West Lander was appointed chief engineer of the project and was charged with surveying a "practicable" route for a wagon road. Lander lost no time in interpreting his instructions to mean:

> "A route has therefore been sought over the difficult portions of the (central) division, which would...First. Avoid the alkaline plains of the desert of the Big Sandy. Second. Pass across the Green River at a point above the depth of water requiring ferriage. Third. Throughout the length avoid bridge crossings and be abundantly furnished with excellent grass and fuel." (U.S. Congress 1859:House Executive Document 108).

In the summer of 1857 Lander split his group into several parties, each of which was to conduct a reconnaissance of an area from South Pass to the Bear River Valley. Lander's party actually found a route to the south of the then-used trails which he estimated could save the emigrants seven days travel, but the route passed through Mormon settlements in northern Utah. Lander himself surveyed a northern route which probably was much the same trail as Bonneville had used to bring the first wagons to the Green River Valley in 1832. That route skirted the base of the Wind River Range after leaving South Pass, then turned west and crossed the New Fork and Green Rivers. The trail passed just north of present Marbleton and then ascended South Piney Creek. It then climbed over the Wyoming Range at Thompson Pass and continued to Wagner Pass, Star Valley and Fort Hall (Rosenberg 1982a:14).

Lander supervised construction of the road in 1858-59. Until the construction team reached the canyon of South Piney Creek the major tasks were grading and clearing of sagebrush. From the mouth of the canyon westward the road was often hacked out of willows and dense forest, and much grading and filling was necessary. The narrowness of the canyon and the meandering of South Piney Creek complicated matters; the road forded the creek eight times in less than eight miles. In spite of the construction obstacles, the party completed improvements on the length of the trail in the single 1858 season. Lander reported that "over 62,000 cubic yards of earth and rock have been removed, eleven miles of willow, and 23 miles of heavy timber cleared from the roadway" (U.S. Congress 1859:House Executive Document 108).

During construction to the west of Thompson Pass, Lander established a supply depot called Piney at the head of the South Piney Creek canyon. Although the exact location of Fort Piney was not described in Lander's reports, it was probably at or very near the location of the present Snyder Basin Guard Station. The distances and general description given by Lander in his Emigrant Guide fit that location:

> From the mouth of canon to Piney Fort...7.70 miles...you will find several camping spots in the canon, between its mouth and Piney Fort; you had better lay over at Piney Fort, as you have excellent grass, and a block-house, with corral attached (U.S. Congress 1859:House Executive Document 108).

Further evidence that the Guard Station is the site of Fort Piney was the unearthing of a large number of oxen and mule shoes on the site after 1912 (Rosenberg 1982a:19).

The Lander Cutoff was immediately successful in drawing emigrants away from the other trails, in part because Lander himself promoted it by means of his Emigrant Guide and by posting persons at South Pass to direct emigrants onto the new route. Lander estimated that 13,000 persons traveled over the new road in the first season of 1859, and at Fort Hall about 9,000 persons signed a petition supporting the route. The next year Lander estimated 10,000 emigrants passed over his trail, but by then the tide of emigration was slowing perceptibly. It is not possible to determine exactly the number of persons who followed the Lander Cutoff, but it probably exceeded 40,000. Mary Hurlburt Scott (1958) gives accounts of travel over the Lander Cutoff, from the 1880's well into the 20th century. The final sighting of a westward bound emigrant wagon train on the trail was in 1912 (Rosenberg 1982a:18-19).

Ranches and Settlements

The first known incident of cattle being brought into the region was in 1833, when Robert Campbell of the Rocky Mountain Fur Company drove four cows and two bulls to the rendezvous at Green River. In the years 1841-1860, thousands of head of cattle, sheep and horses were herded over the various trails to Utah, California, and Oregon. By 1859 the stock business was thriving on Blacks Fork and Hams Fork, where Jim Bridger, Jack Robertson and other former trappers maintained herds obtained from emigrants along the trail. The usual manner of business was for the stockmen to obtain worn-out oxen and horses from the emigrant in exchange for fewer fresh animals, or for the traders to sell fresh stock outright. The sick and gaunt animals were then lead to pasture for a period of recuperation (Wright 1942:10-14).

The completion of the Union Pacific Railroad through the region in 1868 provided a major impetus for the development of stock ranches on the high plains of Wyoming and Colorado. Eastern markets were thereafter accessible without the long drive to the settlements on the Missouri River. The stock driven into Oregon and California had multiplied over the years, and by the early 1870s the value of beef cattle in the eastern U.S. exceeded the cost of animals on the west coast. About 1875 a major reversal flow began on the Lander Cutoff as herds of cattle were brought eastward. Most of these cattle were used to establish range herds on the famous large ranches of eastern Wyoming and western Nebraska, but other herds were marketed to the eastern states via Union Pacific. By 1877 cattle driven eastward to Wyoming numbered 50,000 and by 1879 an estimated 100,000 were making the long drive per year (Frank 1954:12-15).

Sheep also were driven over the trails in those years. The first known flocks in the region were driven over the Mormon Trail sometime before 1869. In that year a flock was shipped by rail to Point of Rocks, and then trailed northward to a ranch near Lander. In 1870, Wyoming contained only about 6,400 sheep, but the number of sheep in the territory would rise dramatically in the following years. In 1882 alone at least

200,000 sheep were trailed from points to the west to the Laramie Plains and farther east (Frank 1954:119;121-122).

The establishment of permanent ranches in the Green River area corresponded with the general explosion in stock raising on the High Plains. The first ranches were in the southern part of the Green River region. In 1872 John Smith established a sheep ranch on Fontenelle Creek a few miles above the mouth. The next year the original Pomeroy Ranch was established near the mouth of Fontenelle Creek, and two other Pomeroy Ranches were established farther up that creek in the foothills of the Wyoming Range. In 1879 Daniel Rathburn settled just upstream from the original Pomeroy Ranch. Other early ranchers on the Fontenelle were Charles Holden in 1879, Ariel Hanson in 1881, John Holland and George McCray by 1883. Alexander Real also had a large operation in place by 1883, with line cabins on the Hams Fork, Fontenelle Creek, and Little Muddy Creek. Real's ranch, known as the Spur, had been started by M. E. Post and Frances E. Warren in 1882, and soon became the largest cattle operation in the Rocky Mountains. The headquarters of the Spur Ranch was near the mouth of La Barge Creek (Miller 1936; Stone 1924:215-218; Rosenberg 1982a:25-26).

Settlement in the area drained by the Piney Creeks apparently began in 1878, when Otto Leifer and Edward Swan established two ranches on Middle Piney Creek. In 1879 Daniel Budd and Hugh McKay drove a herd of 1,000 head of cattle to a point on North Piney Creek about four miles above the mouth of that stream. In 1879 Amos W. Smith established on Muddy Creek one of the outstanding ranches of the region, called the Muleshoe Ranch. South Piney Creek was first settled in 1889 by Frank A. Fear. Cottonwood

Creek, to the north of the Piney Creek, was settled by Frank Ball in 1888 (Rosenberg 1982a:28-30).

Probably the largest ranching operation in the northern portion of the study region was that of Abner Luman. Luman drove 1,000 shorthorns to the Upper Green River in 1880 and eventually established his headquarters near the point where the Lander Trail forded the Green River. Luman gradually extended his operation by buying ranches on the Big Sandy River and farther up the Green River Valley. The Luman herd totalled up to 20,000 cattle and perhaps 50,000 sheep at peak period. Luman and most other ranchers of the region diverted streams to irrigate hay meadows, especially after a disastrous winter in 1889 (Rosenberg 1982a:30).

The ranchers cooperated in semi-annual stock drives. In the spring the drovers would slowly push cattle away from the home ranches and into higher pastures where grass would be available through the summer. In the fall a general roundup would be held and stock would be separated by brands. At that time herds would be split, part to be sold and the rest to be returned to winter range near the home ranches. The general fall roundup probably began in the late 1880s and worked generally southward from the foothills of the Gros Ventres Range to Fontenelle Creek. In later years this large territory was broken into smaller units and controlled by loose range association. By 1908 the area from Horse Creek southward was served by the Big Piney Roundup, and the territory included upper La Barge, Coal, Fish, Cottonwood, and Piney Creeks.

The culmination of the roundup was the drive to market on the Union Pacific Railroad at Rock Springs, Point of Rocks, Green River City, and other rail stations. After the Oregon Shortline was completed in 1882, the rail station at Opal became a major shipping point for ranches on the slopes of the Wyoming range. Although a number of routes for stock drives were probably used, the principal route followed the Pinedale to Opal stagecoach road and also followed a corridor reserved by the Secretary of the Interior for stock drive purposes. Truck transportation began to replace the difficult herd drives about 1920, but the drives to Opal continued until 1934 (Wallace 1976:12-28).

General settlement of the Upper Green River Valley followed the geographic patterns established by the open range ranches. Land entries in the study area were made first for the headquarters sites of the ranches, then for the hay meadows that could be irrigated, and then for tracts bordering streams which afforded water for stock and for irrigation purposes. Most of the land away from the streams was never legally entered and remained open range for livestock. The peak in rural settlement population was reached in the 1920s, and since that time many ranches have been absorbed into larger operating units.

Early communication and commerce were also tied to the ranching network. Prior to 1920 all of the rural post offices and small town sites of the region were or had been ranch headquarters. The settlements and post offices were linked by stagecoach lines running from Kemmerer and Opal to Pinedale, and by another stageline running from Pinedale to Lander and Rock Springs. A major shift in the economic base of the area began in the early 1920s, when several important oil discoveries were made in the region. The village of La Barge, first called Tulsa, and to a large degree the town of Marbleton were products of the oil boom.

Recreational use of the area has developed steadily throughout the course of the 20th century. Hunting and fishing in particular attract seasonal visitors to the area, and contribute significantly to local economies.

SUMMARY OF ARCHAEOLOGICAL AND HISTORICAL INVESTIGATIONS IN THE STUDY AREA

This section presents documentation of past and ongoing cultural resource investigations in the study area and inventories of all known prehistoric and historic sites. These data are assembled as an initial step toward decision-making processes that will affect the level and character of future investigations in the area.

Previous surveys in the study area have been conducted at varying levels of intensity. Terminology currently in use by the BLM to describe these levels will be employed throughout this report. It should be kept in mind that the terms are of recent origin, and that authors of many past reports do not refer to specific levels of survey intensity.

A Class I inventory, or overview, is a summary or assessment of existing cultural resource records within a given study area. It entails literature and files research but, generally, no actual fieldwork. A Class I not only summarizes existing data but also results in recommendations for required additional investigation (usually in the context of a specific proposed project) and provides the local or regional basis upon which significance assessments can be made. A Class II inventory is a sampling survey. Usually accomplished in systematic fashion, a Class II seeks to make statements about the resources of an area using a statistically based field sample of a relatively small portion of the area. In a Class III inventory the area is intensively surveyed. In reality, of course, a true 100% surface inspection for cultural sites is rarely feasible. The BLM has adopted standards for Class III survey that stipulate maximum spacing between survey sweeps of 30 meters (100 feet). This distance allows for reasonably complete ground coverage and ensures discovery of all but the smallest resources except in cases where surface visibility is impaired by vegetation cover. In the Riley Ridge study area, nearly all past surveys have been of the Class III, intensive variety. Actual field methods have, however, varied from one project to the next, particularly among those dating prior to 1979.

Archaeological excavations are of two varieties. Test excavation comprises subsurface sampling as a means of determining the nature as well as vertical and horizontal extent of cultural deposits. It is an evaluative technique used as a preliminary assessment of site significance and research potential. Full excavation (referred to as "mitigation" when used in the context of resource management) refers to extensive subsurface data retrieval conducted in the context of a research design. It often precedes disturbance of the site area by energy exploration interests. Test excavations in the Riley Ridge area have been relatively infrequent. Full excavations are even scarcer.

A thorough search of cultural resource records for the Riley Ridge area indicates several basic facts about the character of previous investigation. All of the following points unavoidably affect the conclusions that can be drawn about the area's prehistory and history on the basis of existing data.

Very little archaeological or historical work was conducted in the area proper prior to the early 1970s. Energy-related cultural resource investigations were first conducted in 1973 although the level of work remained low until 1977. The annual volume of work, measured in terms of individual projects, more than tripled between 1977 and 1979 and has remained high to the present time. Since 1973, 24 companies, institutions, agencies, and permitted individuals have conducted archaeological and/or historical studies in the area. With only a few exceptions, these projects have been underwritten by private energy firms operating on public lands. The Bureau of Land Management has also sponsored cultural resource studies as planning and management aids, particularly in recent years.

The diversity of archaeological contractors in combination with lax to nonexistent procedural guidelines, particularly in the early to mid-1970s, resulted in a lack of standardization in methods and extremely uneven quality of reporting. Fortunately, the overall quality of work increased dramatically between 1978 and 1979 as agency requirements (particularly BLM) wre stiffened and comprehensive review procedures undertaken. The reliability and usefulness of the archaeological data base that has accumulated since 1978 is measurably improved over that from earlier years.

Major inconsistencies and omissions evident in past archaeological projects fall into three major areas: field methods, site location plotting/recording, and reporting. Precise surveying techniques are rarely stated in early reports. Although nearly all projects were theoretically of the Class III variety, the actual intensity of ground coverage apparently varied a great deal. Beginning in 1979, 40-acre well pad areas and 100-foot rights-of-way became standard for cultural resource surveys. Prior to that time, however, little concensus existed and the exact area of coverage was often not reported.

The greatest problems relating to archaeological investigations are in the area of site reporting. A single standardized site form was not used in Wyoming prior to 1982, and many early forms were geared to quick strike field recording rather than comprehensive documentation of all pertinent cultural and environmental data. In addition to a general paucity of information, many forms give vague management recommendations or none whatsoever. Because explicit reference to National Register eligibility criteria has been required for only about three years, significance evaluations on the basis of site form information are difficult or impossible in many cases. Definitions of cultural resources are not standardized, and the term site has not held the same precise meaning for all previous recorders. Enough concensus -- perhaps fortuitous -- has existed in this area that no changes in cultural resource designations were deemed necessary for the current report. Generally, sites comprise loci of past activity consisting of one or more features, structures (or structural remnants), scatter or concentration of artifacts, or combinations of the above. Isolated finds are individual artifacts or small numbers of artifacts having no apparent association with other cultural materials. Unfortunately, historic livestock camps, which now are regarded as sites, were routinely ignored by archaeologists prior to 1979-80, and few are on record for the project area despite its ranching history. Recommended working definitions for cultural resources, for use in future Riley Ridge investigations, are included in the compliance plan developed for the Riley Ridge Project.

Site location plotting and recording by archaeologists has been thorough and precise (in most instances) since 1979. For some earlier reports, however, maps do not exist or locations are carelessly plotted. Legal descriptions are typically abridged in early reports and UTMs lacking. A few sites included in the present inventory are not plotted because of uncertainty about their exact locations. Similar problems exist in some cases with defining precise project locations (e.g., survey area boundaries), due to both poor map plotting and inadequate explanation of field methods.

Overall field project reporting techniques have improved considerably over the past decade, although much ancillary project information has been lost due to poor reports. Records of some earlier projects exist only as site forms or maps. In situations where a letter to a client served to document a survey, it is possible that no permanent record of fieldwork exists at all. This is particularly true if no cultural resources were found. Reports of investigations dating 1979 to the present are replete with legal descriptions, explanations of field techniques, file search data, descriptions of cultural resources, recommendations and significance evaluations. Little difficulty was experienced in gleaning useful information from the vast majority of these recent reports.

Investigation of historic period resources in the general region has usually consisted either of archival/documentary research by historians or recording of historical resources by archaeologists; seldom have the two methods of inquiry been married in a systematic approach to cultural resources inventory and evaluation. This unfortunate state of matters has resulted in two major shortcomings of the available data base: (1) prehistoric archaeologists have not recorded many historic period resources, such as buildings and trails, because they did not recognize a potential for significance in these cultural manifestations; and (2) historians have entered site designations in the public records on the basis of archival research alone, without ground-checking their presumptions.

The existing files of known historic period cultural resources include many listings that have been assigned Smithsonian Institution Trinomial Systems numbers, but which in fact should be considered somewhat suspect site leads. These site leads are helpful, however, in predicting the possible existence of resources and resulting possible project impacts before field inventory is conducted, and the documentary site files are helpful in directing the researcher to sources of information about the study area. Less helpful are a number of sites given Smithsonian numbers soley on the basis of their inclusion in the 1975 Wyoming Historic Preservation Plan, for which there is no known supporting documentation.

A similar problem exists with major trail routes, which are considered to be eligible for listing in the National Register of Historic Places. The Kemmerer Resource Area office of the BLM has some information on historic trails. The major source of trail route information seems to be a series of maps with trails drawn in, maintained by the Wyoming Recreation Commission in Cheyenne. Although the routes depicted on these maps have in some instances been verified by ground survey and by consultation of other archival sources, the maps themselves contain no indication of the original source of information. The shortcomings of these maps are that they may be used in an exclusionary manner; areas not indicated to contain historic trails may be mistakenly excluded from consideration although historic trail remains or related features may exist. Archival sources indicate that even the major trails had variant routes. The entire supposed routes of the major historic trails are considered in the data base to be eligible for listing in the National Register, without reference to the actual physical nature or integrity of the trail remains.

PREVIOUS CULTURAL RESOURCE INVESTIGATIONS IN THE STUDY AREA

To date, 435 individual archaeological and/or historical investigations have been documented that fall within impact areas associated with one or more of the Riley Ridge actions. Many of the previous projects only partially affect Riley Ridge, e.g., survey of an access road that crosses a proposed mile-wide right-of-way corridor and continues beyond it. All but a handful of these projects are Class III inventories conducted by archaeologists. The actual intensity of surface inspection probably varied in earlier surveys. Several smaller Class III archaeological inventories have been followed by test and/or full excavations; however, in no instance has a great deal of effort been expended in digging. A single Class I archaeological report (Hakiel 1982) is on file. Most of the area included in this study is exterior to Riley Ridge facilities although it is crossed by several proposed rights-of-way. The study also included some Class II-type sampling. Fieldwork for a large-scale Class II archaeological inventory in the La Barge area was recently completed by Esca-Tech Corp., and analysis is in progress. The survey is centered immediately southeast of and adjacent to the proposed Riley Ridge well field; this area is also crossed by several proposed rights-of-way. At the time of writing, no report had been produced and data from this project were not available. A field survey of the Craven Creek plant site has also been conducted by WCRM. The results of this survey are not available for review at the present time.

There has been no study of historic period resources within the general region of the project that could be used as a model for prediction of the likelihood of occurrence, physical character, and relative integrity and cultural significance of the broad spectrum of historic site types. With two exceptions there have also not been comparative studies of particular classes of resources within the region, such as architectural overviews or examination of the physical features and locations of early open range ranching sites. The exceptions are a survey and a management plan for parts of the Oregon Trail, discussed below.

Within the well field portion of this study, only one historic period resource has actually been field recorded, this being a portion of the Lander Cutoff, 48SU387 (Albanese 1980). Although there have been a number of cultural resources surveys within the well field, no other recordings of the Lander Cutoff or the Opal Stage Road appear in the official data files. Remnants of these two trails are assumed to exist in 27 sections of the well field area, and reconnaissance over the Lander route indicates that portions of that trail have recently been obliterated by energy projects for which surveys were conducted.

A search of files and manuscript collections at the Wyoming Recreation Commission (WRC) and Wyoming Archives and History Department in Cheyenne, the BLM in Rock Springs and Kemmerer, and the USFS in Pinedale revealed no previous field studies about historic period resources in the well field except for the short report by Albanese referenced above. An excellent historical overview of the general area of the well field was recently completed, titled The Piney Country, Sublette County, Wyoming: An Historical Study for the Northwest Pipeline Big Piney Gathering System (Rosenberg 1982a). Although the report was primarily concerned with a project area to the east and southeast of the Riley Ridge well field, the overview is sufficient to indicate the major historic themes, events, and places within the well field. Because the primary project area for Rosenberg's report did not include the Riley Ridge well field, the report does not contain the exact legal locations of many sites, especially early ranches. As indicated in the cultural/historical overview portion of the present report, many of those legal locations are evident in General Land Office survey plats, surveyors' notes, and the land office track books (Appendix B).

The various non-well field facilities of the Riley Ridge Project extend over a vast area of southwestern Wyoming, and several previous studies have addressed historic period cultural resources in parts of that area. The earliest effort to identify and record actual sites through field survey was reported in A Preliminary Survey of the Fontenelle Reservoir, Wyoming (Dibble and Day 1962). The area of consideration in that report was limited to the then-proposed Fontenelle Reservoir, but the brief historical overview statement also has general applicability to a larger surrounding area.

In 1976 Western Interpretive Services, Inc. produced for the BLM a general historical overview titled Historic Resources Base Data:

Sweetwater/Kemmerer and Hanna/Atlantic Rim Coal Studies (Murray, Wottage, and Bessette 1976). This report is well researched and documented, and it contains references to exact legal locations of sites when possible. The limitations to usefulness of that report in the present study are that the site-specific information is now somewhat dated, field inventory was not conducted to verify the accuracy of archivally-derived site locations, and the overview area included only the far southern portion of the present study area. Although the report is somewhat inconsistent in the depth of coverage of historic themes, particularly to the detriment of post-open range ranching and small-unit farming settlement, it is a commendable accumulation of information about possible historic period cultural resources in southern Wyoming.

From 1976 to 1980 the BLM contracted for the writing of several historical overviews of Wyoming, including Class I Historic Cultural Resource Inventory for the Rock Springs District, Bureau of Land Management (Murray 1979). This report repeats much general historical information in the 1976 report of Murray et al. but also contains information about military activities, the Pony Express, freighting lines, and sites associated with these historic activities in the Rock Springs District. The report pertains mainly to the eastern half of the Riley Ridge study area. The same general area was again addressed in Sweetwater County: A Brief History (Kathka 1980); this report contains little information not presented in other, more exhaustive works.

Two historical cultural resources reports have been prepared for the Red Desert area, An Historical Overview of the Red Desert Region (Rosenberg 1981) and Historical Cultural Resources of the ENQ Project

Area, Sweetwater County, Wyoming (Markoff 1981). Although the subject area of these works is to the east and south of the Riley Ridge study area, these well-researched and well-documented studies contain general historical information pertinent to the study of the Riley Ridge area.

In 1981 the Wyoming State Historic Preservation Office (SHPO) began to accept abbreviated Class I studies for projects planned in areas in which extensive historical overviews had already been compiled. According to the guidelines for such cases established by the Wyoming SHPO, Alan Alpert prepared Class I Cultural Resources Overview for the Proposed Frontier Pipeline (Alpert 1982). The pipeline would pass through the far southern portion of the Riley Ridge area from west to east. Alpert made use of Murray's 1976 and 1979 reports for the area between Evanston and Rock Springs, as well as Markoff's Red Desert report. Alpert's report is exceptionally concise and crisp, but the themes of railroad development and early open range ranching were given inadequate regional history. Because Alpert's work is directed toward a study area on the fringe of the Riley Ridge Project and is largely an abbreviation of earlier overviews, it has little utility for study of possible Riley Ridge Project impacts.

The southwestern portion of the Riley Ridge study area has been the subject of two historical overviews. A Cultural Resource Inventory for the Amoco Condensate Collection System - Moxa Arch Field, Lincoln, Sweetwater and Uinta Counties, Wyoming (historical section) (Rosenberg 1982b) pertains to the area roughly from Opal to Granger and southward from that line for about 30 miles. The historical portion of the report is limited almost entirely to background information about major historical resources likely to be impacted by the Moxa Arch project, particularly the nationally significant segments of the Oregon Trail. The report was not intended to be a general overview and did not address some of the major themes of area history such as mining, early ranching, and construction of the Union Pacific Railroad. It is therefore of limited usefulness in determining possible impacts to historic cultural resources of the Riley Ridge Project.

A more complete and applicable document is Historical Overview of the Ham's Fork Region (Schweigert 1981). This study is primarily concerned with the Ham's Fork Valley and adjacent areas to the west, but also addresses the general historical themes of the region. It is useful to the present study in providing a historical context for that area and a description of some historic cultural resources in the Kemmerer-Opal vicinity.

The Oregon Trail has been the subject of two special studies which included parts of the Riley Ridge study area. In 1981 the National Park Service published Comprehensive Management and Use Plan, Oregon National Historical Trail (U.S Department of Interior 1981), which was a culmination of efforts under the National Historic Trails Study. The multi-volume report provides a systematic management plan for the main or Fort Bridger route of the Oregon Trail and documents that route with both archival and field evidence. In early 1982, the Idaho State Historical Society published Oregon Trail Cultural Resource Study, Fort Casper, Wyoming to Fort Boise, Hudsons Bay Company, Idaho. This study further documented the location, historical significance, and physical integrity of the Oregon, California, and Mormon routes of the main trail through Wyoming and Utah. Both of the studies of the Oregon trail are excellent in providing detailed historical associations for specific locations, but unfortunately neither study addresses in detail the major and minor cut-offs or variations of the main trail in Wyoming.

Valuable documentation of historical sites often is available from sources that were not produced by cultural resource specialists or intended for their use. A good example is Ross Lynn Jensen's Masters Thesis, The Greenwood-Sublette Cutoff of the Oregon Trail (1975), which discusses in detail the Sublette Cutoff and the Kinney, Slate Creek, and Baker and Davis routes through the Riley Ridge study area. Three published works of post-1880 history for the area from Pinedale to Opal also are availabe: E.W. Wallace, Wyoming's Own (1976) and They Made Wyoming Their Own (1971), and Housley, Pfaff and Vasey, A Tale of Two Towns - Tulsa and LaBarge (1977). These sources are valuable compilations of primary and secondary information, especially for the portions of the Riley Ridge study area that have not been treated previously in historical overview.

Tables 1-I and 1-II in Appendix D, which is on file with the BLM, summarize previous cultural resource investigations in the Riley Ridge study area. Table 1-I lists all projects or record that involved surface inspection. Table 1-II is organized by Riley Ridge Project facilities.

INVENTORY OF KNOWN PREHISTORIC AND HISTORIC SITES

Four hundred thirty-five cultural resources are on record for the project area (proposed and alternative actions combined). (This figure excludes eight prehistoric sites that have been assigned Smithsonian numbers but for which no agency records exist, and for which no information could be obtained by the recorder, Archaeological Rescue.)

The great majority of known resources are prehistoric/American Indian sites recorded in the course of small scale energy-related archaeological surveys. Of the 435 site total, 323 are prehistoric/American Indian, 84 are historic/Euro-American, and 28 exhibit both prehistoric and historic components.

Due to inconsistent patterns of data recording, functional interpretation of prehistoric/American Indian sites is minimized here. Descriptively, these sites (which include the 28 multicomponent prehistoric-historic sites referred to above) are broken down as follows:

Prehistoric Site Type	Number of Sites
(1) Lithics associated with hearths and/or fire-cracked rock	140
(2) Lithics with no associated features	121
(3) Lithics and ground stone associated with hearths/fire-cracked rock	22
(4) Hearths/fire-cracked rock with no associated artifacts	25
(5) Lithics and ground stone with no associated features	14
(6) Lithics and bone associated with hearths/fire-cracked rock	8
(7) Stone circle(s), stone alignment(s), or cairn(s) with no associated artifacts	6
(8) Stone circle(s) and hearth(s) associated with lithics	3
(9) Lithics, ground stone, and ceramics associated with hearths/fire-cracked rock	2

(10)	Lithics, ground stone, and bone associated with hearth/fire-cracked rock	1
(11)	Lithics and ceramics associated with hearths/fire-cracked rock	1
(12)	Lithics, ceramics with no associated features	1
(13)	Lithics, bone with no associated features	3
(14)	Structure (unidentified) with hearths, lithics	1
(15)	Miscellaneous (no description)	3
		TOTAL: 351

Approximately 10% of prehistoric sites have been assigned dates. Of those that have, determinations have usually been made on the basis of diagnostic projectile point styles. Uncertainty about temporal designations is expressed by the original recorders in some cases. The traditional temporal-classificatory sequence described in the prehistoric culture-historical narrative (Figure 1, far right-hand column; cf. Frison 1978) is used to describe these sites. Although 36 sites are so dated, 11 exhibit more than one component (e.g., projectile points representing two or more time periods at one site). The listing below is therefore of components rather than actual sites:

Time Period	Number of Components
Paleo-Indian	3
Early Archaic	4
Middle Archaic	8
Late Archaic	11
Late Prehistoric	21
	TOTAL: 47

On the basis of existing data it is difficult--and potentially misleading--to form generalities about the overall distribution of prehistoric sites within the project area. This is due to two factors: first, the very non-random distribution of previous surveys, which have been concentrated in certain areas but have virtually ignored others; and second, the uncertain reliability of some early projects. In effect, areas where sites appear to be concentrated are those that have received the most scrutiny by archaeologists.

By project action, known prehistoric sites are concentrated in the following areas:

(1) Proposed Action
  (a) Transmission line from Naughton Power Plant to East Dry Basin (AQ+Ex)
  (b) Combined carbon dioxide and sales gas corridor from East Dry Basin (AQ) to Trailblazer
  (c) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP)

(2) Component Alternatives
  (a) Transmission line from Naughton Power Plant to substation (UP&L)

(3) Buckhorn Alternative
  (a) Transmission line from Naughton Power Plant to Buckhorn (AQ+Ex)
  (b) Combined carbon dioxide and sales gas corridor from West Dry Basin (Ex) to Trailblazer
  (c) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP)
  (d) Sulfur pipeline from Buckhorn (AQ+Ex)

(4) Shute Creek Alternative
  (a) Transmission line from Naughton Power Plant to Buckhorn (AQ+Ex)
  (b) Combined carbon dioxide and sales gas corridor from Buckhorn (AQ) to Trailblazer

(c) Carbon dioxide and sales gas branch from Shute Creek (Ex)

(d) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP)

(e) Sulfur pipeline from Buckhorn to loadout (AQ)

(5) Northern Alternative

(a) Transmission line from Naughton Power Plant to West Dry Basin (Ex)

(b) Sales gas and carbon dioxide pipeline from West Dry Basin to Trailblazer (Ex)

(c) Sulfur pipeline branch from Buckhorn (AQ)

Relatively few prehistoric sites are on record within the proposed well field boundaries despite intense survey activity in some areas. Further discussion of prehistoric site distribution and of environmental factors conditioning site location may be found in the final section of this chapter.

By site type, historic resources within the Riley Ridge study area are broken down as follows:

Historic Site Type	Numbers of Sites
Homesteads/ranches	13
Trails/roads	9
Trail-related sites	3
Trash scatters/dumps (including probable stockmens' camps)	48
Miscellaneous structures	19
Coal mines/fields/ prospects	10
Campsites	3
Grave/cemetery	1

Railroad station	1
Tunnel	1
Sawmill	1
Other (no descriptive information)	3
TOTAL:	112

No summary breakdown is given by age for historic sites since all represent such a short period of time. Also, no concentrations of historic sites by project facility are presented because such concentrations simply do not exist. Historic sites are included in the listing of resources by project action and facility in Appendix D of this report.

Many of the historic sites known to exist in the study area have not actually been recorded by professional archaeologists or historians, but have been given site status on the basis of archival or informant information. Appropriately, there are seldom management recommendations available for these sites. The listed eligibility status of those sites is that assumed by the Wyoming Recreation Commission (SHPO); the "eligible" status of some sites should be considered tentative at best but must be assumed true until proven otherwise. In general, information about known sites is scant, and detailed data as to site characteristics are scarce. True knowledge of eligibility for inclusion on the National Register of Historic Places is thus lacking for the great majority of sites.

Known sites in the study area represent most of the historic themes of the region. Overland emigration is represented by nine different routes plus miscellaneous associated sites such as emigrant inscriptions and graves. The number of Smithsonian site numbers designating these routes exceeds nine because each tends to have a different number for each county traversed. Other themes exemplified by known sites (see Tables 1-III through I-V in Appendix D) are ranching, coal mining, railroad construction and operation, lumbering, limestone production, and activities of the Civilian Conservation Corps.

Historic trails are a distinctive--and, in the case of the current project, dominant--site type and are afforded special consideration in this study. Direct and indirect impact areas of non-well field facilities with the Proposed Action and various alternatives contain recorded or reported historic trails in 123 sections of land, including some sections in which more than one trail occurs within a corridor. Proposed facilities at the centerlines of study corridors actually cross known historic trails in 53 sections, and may cross trails more than once within the same sections. In 85 sections the study corridors contain segments of the main Oregon Trail, the Overland Trail, the Sublette Cutoff, the Hams Fork Cutoff, the Slate Creek Cutoff, or the Kinney Cutoff, all of which are considered to be eligible for listing in the National Register.

Segments of the Pony Express Route variation of the main Oregon Trail are reported within study corridors in two sections, and in eight sections the Bryan to South Pass City and Green River to South Pass City stage routes are within study corridors. These three trails are also assumed to be eligible. Apparent actual crossings of all such trails occur in 41 sections of land. The Opal to Pinedale stage route will apparently be crossed at least 12 times, and will be within study corridors in another 16 sections.

To the extent that information exists, the segment of the Lander Cutoff of the Oregon Trail that traverses the Riley Ridge well field is described herein. It should be stated, however, that this focus on the Lander Cutoff in no way diminishes the potential historical significance of the other trails in the project area.

The historical significance of the Lander Cutoff (and other trails as well) can be evaluated according to (1) the historical associations and physical nature of the resource; (2) the integrity of the material, form, and setting of the resource; and (3) the potential of the resource for scientific study or cultural enhancement through interpretive development and/or preservation. There is no question that the Lander Cutoff is eligible for nomination to the National Register of Historic Places on the basis of its association with the broad historical themes of the westward overland migration and the development of open range ranching on the High Plains. Because the trail was laid out by the Army, the route is well defined in public reports, maps, and other official documents, as well as in diaries of emigrants and reminiscences of early ranchers and cowboys.

As indicated in the historic overview, the Lander Cutoff was established in 1857-58 as an alternative route for westbound overland emigrants. The road was surveyed and improved by the federal government, and it was an extremely important trail in the later years of the settlement migration to Oregon and California. The route was followed by wagon trains from 1858 until at least 1912, but by the mid-1870s had also become the major route for trailing herds of cattle and sheep from Oregon and California onto the ranges of Wyoming. Because the Lander Cutoff was a practical route through the desert ridges and the Wyoming Range and because it was early improved with bridges, grading and timber slashing, it remained in use for various purposes after the wagon train and open range ranching eras passed. Unlike the main Oregon Trail to the south, the Lander Cutoff apparently had few alternate or splinter segments.

The physical nature and integrity of the trail through most of the Riley Ridge study area apparently have not been previously documented. Cultural resources files of the Wyoming SHPO and the WRC contain only site lead information about the trail's location and cartographic representation based primarily on original General Land Office survey plats. Topographic maps produced by the USGS show the trail route clearly, and concrete markers were erected at selected locations along the trail under a program supported by the Wyoming State Legislature in 1913 and later by a cooperative program of the BLM and the Sublette County Historical Society. In 1966 Idaho State University conducted a study of the Lander Cutoff in the Caribou and Bridger National Forests, including a portion of the Riley Ridge study area, where the USFS has erected several interpretive signs. The BLM, USFS, and the Sublette County Historical Society have cooperated to produce a tour guide to the entire length of the trail in Wyoming and Idaho.

Despite all of the above actions and massive oil and gas exploration, neither the trail nor attendant features have been recorded on site forms. Geologist John Albanese reported the existence of an 1800-foot-long trail segment in the area of an American Quasar well pad survey. The

USFS internal cultural files also contain a reference to trail segments, but the information apparently was derived from archival sources rather than from field survey. Quad maps, BLM ownership and management maps, and general highway maps all indicate that parts of the trail have been improved for modern vehicular travel or that new roads have been constructed over or very near the trail route in the Riley Ridge study area. Road construction or improvement often destroys or erodes the integrity of nearby trail segments.

In order to establish the physical nature and integrity of the trail in the study area, including determination of which segments of the trail had been obliterated, historian Kurt P. Schweigert conducted limited field reconnaissance along the trail route on September 22 and 23, 1982. The methods used are described in Chapter 3. Three segments of the trail were not closely examined because of failing light and lack of time for further work, or because they were located on private or public lands posted against trespassing or were otherwise inaccessible. The results of the Lander Cutoff reconnaissance are found in Appendix C.

In addition to the Lander Cutoff, USGS quadrangle maps indicate that a number of ranch headquarters and other architectural features exist within the well field. Archival sources indicate that some of these sites could be significant for their association with early ranching activities in the area. At present, however, there is no information available about the physical nature and integrity of these sites.

Another historic site associated with the theme of overland emigrant travel that merits special mention is 48LN300 (Vlcek, personal communication 1983). This site, which has yet to be fully recorded and evaluated, is situated along the Sublette Cutoff and comprises at least three concentrations of inscriptions on a south-facing ridge. Dates range from 1845 to the mid 1850s. Inscriptions consist primarily of names and dates although states and counties of origin also appear in some cases. Most are inscribed although some lettering was accomplished with a dark tar-like substance. Most of the known inscriptions occur along a 1500-foot stretch of the Sublette Cutoff; however, Vlcek believes the total site area to be in excess of one and one-quarter sections.

Site 48LN300 is not on the National Register of Historic Places although it is the opinion of the Kemmerer Resource Area Archeologist that it is eligible (Vleck, personal communication, 1983). It is associated with events important in American history and appears to be in pristine condition. A concentration of 1849 dates suggest heavy use of the Sublette Cutoff during the California gold rush. The potential exists for buried historic materials in the vicinity of the inscriptions since the locality may have served as a staging area on the west side of the Green River.

No information exists about National Register eligibility or potential for 164 (37.7%) of the sites that could be affected by the Riley Ridge Project. This fact is due mainly to pre-1979 requirements governing procedures for assessing site significance. Most forms completed between 1979 and 1982 do contain preliminary recommendations relative to National Register eligibility criteria. No firm judgements can be made here of National Register status in cases where none was offered by the original recorder, particularly since known sites have not been reinspected in the field. However, in cases where there is any uncertainty at all about potential significance (based both on site description and original recommendation) it is assumed that the site is eligible for National Register inclusions. All such sites are included in the impact assessment. All will have to be dealt with as if they are eligible, if threatened by project activities, unless field reevaluation demonstrates that in fact they do not meet National Register eligibility criteria. (See discussion in Impact Assessment, Chapter 2.) It is probable that some have actually been destroyed since the time they were initially recorded. Of 271 sites in the Riley Ridge study area for which specific recommendations of National Register eligibility have been made, 55 were regarded by the recorder as potentially meeting the criteria. No sites in the project area are actually on the National Register although two (48LN300, historic and 48LN1051, prehistoric) have been determined eligible.

Tables 1-III through 1-V in Appendix D, on file with the BLM, present data on known prehistoric and historic sites that are potentially affected by the Riley Ridge Project. Appendix D also presents summary information on historic trails and other routes within the project area. Specifically enumerated are data regarding trail locations, National Register evaluations and current impact.

SYNTHESIS OF SITE-ENVIRONMENT RELATIONSHIPS

The discussion that follows pertains only to prehistoric sites in the Riley Ridge study area. The factors that affect historic site location (trails, homesteads, etc.) are better understood and thus require less analysis. Unlike historic resources, prehistoric sites may not be placed in the context of written records. Our understanding of them derives largely from the nature of the remains themselves and from their distribution across the landscape. By comparing and contrasting data from sites throughout the area, we may be able to develop certain predictive capabilities in terms of environmental associations that not only can aid in management but also can enhance our understanding of prehistoric inhabitants.

A predictive model for cultural resources, in the current usage of the term, is a statement or formula based on sampling data that allows one to estimate with some confidence the distribution of sites within a defined study area. A true predictive model is predicated on controlled, systematic sampling and definition of recurring associations of sites with specific environmental variables. Properly constructed, the model facilitates a statistically based extrapolation to unsampled areas of the study domain, its accuracy within a known probability range.

An estimation of prehistoric site type and distribution in the Riley Ridge area is just that -- an estimation. No suitable base exists upon which probability statements can be made. To state, however, that no useful information is available is to deny the importance of past and ongoing cultural resources investigations in the region. All studies, regardless of scope or design, lend some information to the overall data base. In scientific research, hypotheses are frequently generated on the basis of inadequate data, only to be reformulated in the light of new facts. The statements that follow should therefore be regarded as hypotheses, and the reader must comprehend that our notions about prehistoric habitation of the region will be amended or replaced as field studies proceed.

Hunter-gatherer locational theory has been advanced in recent years through a combination of ethnographic, archaeological, and ethnoarchaeological studies. It seeks to generalize about the strategies employed by non-agricultural peoples both in terms of resource procurement and movements over the landscape. There is little question that the Northwestern Plains and Great Basin culture areas were characterized throughout most or all of prehistory by groups who subsisted on seasonally available food resources and who exhibited mobility rather than sedentism (Frison 1978; Jennings 1968). The discussion is thus germane to the Riley Ridge area and should suggest several basic characteristics of the population that once lived there.

Kainer (1981), in his report of a Class II study of the Overthrust Belt immediately to the south of the Riley Ridge well field, evaluated Binford's (1980) distinction between foragers and collectors. Foragers tend to characterize warmer climates with abundant resources and/or lack of seasonal shortages. They are highly mobile and seldom resort to food storage, merely relocating at intervals in order to take advantage of another food source. Conversely, collectors live in temperate to cold climates that are characterized by strict seasonality and the probability of periodic food shortages. Collectors will employ storage facilities on a seasonal basis as a hedge against those shortages. Although mobile, they are more likely to resort to semi-permanent base camps than are foragers. Single-activity camps associated with procurement of specific resources tend to be linked to base camps. Such base camps would, however, be moved several times in the course of a year. Kainer (1981) correctly believes that the collector model most accurately describes prehistoric inhabitants of the Overthrust Belt. This model is most suitable for the Riley Ridge area as well, and in fact can be generally applied to the southwestern Wyoming region due to the cold, harsh, highly seasonal climate that prevails here. The northwesterly portions of the Riley Ridge study area (particularly the well field) closely resemble Kainer's (1981) Overthrust Belt study tract in terms of elevation, topography and vegetation.

Jochim (1976) has presented some of the most sophisticated reasoning about hunter-gatherer locational practices. Zier and Peebles (1982) adopted several of his basic concepts and, in the light of Class II data, produced a predictive model for the Bear River Divide (a portion of the Overthrust Belt) southwest of Kemmerer. This area closely resembles Riley Ridge environmentally, and factors affecting site location in one area should have at least general implications for the other. Jochim essentially views environmental variables in terms of hunter-gatherer priorities. Economic variables, e.g., plant and animal food resources, have the highest priority and are seen as the overriding justification for a group residing in a particular area. So-called security resources such as shelter and view (and possibly also water and fuel wood, depending upon their scarcity), tend to condition specific site location but cannot be regarded as the primary "draw" in a particular area. Actual site distribution, therefore, will reflect both economic and security considerations. Jochim's model has had the effect of softening earlier hypotheses regarding "mini-max" locational strategies (Gumerman 1971), which held that site location could be interpreted as reflecting efforts to maximize resource procurement while minimizing the effort expended.

This rather deterministic viewpoint at times failed to account for the "human" element in site locations, for example considerations of comfort and view.

Thomas (1973), in his application of Steward's (1938) model of Great Basin Shoshoneans to Nevada's Reese River Valley, elucidated factors about hunter-gatherers having implications for the Riley Ridge/Overthrust area. Kainer (1981) notes that Great Basin models may be more applicable to southwestern Wyoming than those originating in the Northwestern Plains area because of the general paucity of bison (cf. discussion in Kainer 1981:158-169). Thomas was able to identify seasonal camps associated with specific food sources, having an overall locational orientation that reflected the course of the Reese River. He also noted the so-called "edge effect", i.e., site locations tending to occur in ecotonal (transition) areas where resource diversity is more abundant than elsewhere.

Deriving from an examination of Australian Aborigines, Gould (1980) makes numerous assertions about hunter-gatherer subsistence strategy having implications for the present study. In a marginal environment, vegetal resources tend to comprise the great bulk of the diet (cf. Lee and DeVore 1976); however, hunting remains a frequent pursuit and is an activity associated with prestige, a factor that is best explained as adaptive in times of extreme stress when a successful hunt could be crucial to survival. Gould notes that primitive groups will, in the long run, become adjusted to environmental carrying capacity at its lower limits rather than at the year to year norm ("Law of the Minimum"). Risk-minimizing behavior pervades life at all levels in a marginal environment although the immediate benefits of that behavior may not be obvious at any particular time.

In the general Riley Ridge vicinity, several archaeological studies have been completed from which inferences about site location can be made. All occur to the south of the study area and unfortunately no comprehensive data exist from immediate areas to the north, west or east. These studies are most directly applicable to the well field due to proximity, although general statements apply to the right-of-way areas as well. Kainer's (1981) Overthrust Belt study singled out horizontal and vertical distance to ephemeral water sources, elevation, and aspect as significant variables with regard to prehistoric site location. A definite pattern of proximity of sites to ephemeral water was shown, most noticeably to large intermittent drainages. Most sites also occurred within 30 meters vertically of such sources, a conclusion that is not surprising given the previous statement. Kainer notes, however, that the relationship between perennial drainages and sites could not be tested because such water sources were generally excluded from the sample. A strong tendency for all sites except quarries to occur on slopes with aspect ranging from east to southeast to south was also demonstrated. Site location appeared sensitive to elevation also, with density trailing off significantly above 7,200 feet. Association with vegetation zones was generally uncertain, although a preference for juniper breaks is noted as well as a general lack of sites in heavy timber. On a more general level, Kainer observes a correlation between prehistoric activity and ecological diversity.

In the Bear River Divide study, Zier and Peebles (1982) noted similar results when associating site locations with aspect and elevation. Sites demonstrated a strong preference for south facing slopes, and also tended to occur at lower elevations within the study area. In an area that may be regarded as quite rugged, sites occurred on gentle slopes and in localities exhibiting less overall relief than the area as a whole. The study failed to show a distinct preference for site locations in close horizontal or vertical proximity to known water sources, although a weak tendency in this direction existed. Similar findings are anticipated in the project vicinity, particularly along the western edge of the well field, due to the comparability of environmental conditions.

Survey and excavation projects have been conducted during the past several years at various locations along Oyster Ridge and Little Hogsback, along the eastern flank of the Overthrust Belt south of Kemmerer (Metcalf et al. 1982; Zier 1982; Larson et al. 1981; Sanders et al. 1982). All of the work has been conducted in response to proposed coal mining. Investigations have shown a relatively intense pattern of prehistoric utilization dating from Paleo-Indian to Late Prehistoric times. Site areas tend to be characterized by proximity to ephemeral (or, in a few instances, permanent) watercourses; direct association with deep eolian dune deposits; and areas of higher-than-ordinary topograhic and biotic diversity. The general north-south trending zone may be characterized as a large ecotone, forming the transition between well watered, wooded uplands of the Bear River Divide to the west and the drier, lower, generally open Green River Basin on the east.

A final study having direct implications for Riley Ridge settlement patterns is Hakiel (1982). Hakiel performed an "evaluative" inventory of the Fontenelle oil and gas field, an area equalling about two townships that straddles the Green River. La Barge is in the center of the area. Although exterior to the Riley Ridge well field, the Fontenelle field is crossed by several proposed rights-of-way. The study employed mainly existing data from small drilling location surveys and was supplemented with a limited amount of transect sampling. Hakiel (1982) formulates what is referred to as a "predictive model" for site location although it is based on largely unsystematic data and cannot be assessed in terms of statistical accuracy. The study is, however, the only one of its kind that deals with archaeology along the Green River riparian zone and in adjacent upland terrain.

Hakiel observes patterns of prehistoric site locations both near the river and in upland zones. Areas of densest cultural material occur at the mouths of side canyons that drain into the Green River. Sites are generally associated with sand dunes, and in some cases extend to adjacent ridgetops. Cultural materials were noted within the Green River riparian zone although floodplain instability has probably affected visibility. Upland areas exhibiting archaeological sites include the heads of canyons and various river terraces yielding raw lithic materials. An overall orientation toward the river and its resources is evident, although Hakiel (1982:10) notes that the riparian zone is not continuous along the Green River and that site density seems to reflect this fact.

On the basis of all of the above, the following propositions are advanced about Riley Ridge prehistoric site locations:

(1) Sites will tend to be associated with water. Permanent water sources (particularly rivers) and larger ephemeral sources will be areas of dense habitation. Major confluences are particularly site-worthy. The site-water association will be strongest at the lower elevations, where precipitation accumulation is lowest. As the Bear River Divide data suggest, wetter upland areas do not display as keen an association.

(2) Evidence of prehistoric habitation overall will be greater at lower elevations and will display a marked decrease above the 7,000-7,200 ft range. This phenomenon is expected as a direct function of the strict seasonality of the project area, specifically the short growing season for economic plants at higher elevations.

(3) Larger, more complex sites, including the loosely defined category of "base camp", will occur more commonly at lower elevations. Further, they will occur in ecotonal areas more frequently than in areas characterized by homogeneity of topography or of biotic resources. The resource base generally is broader at lower elevations and affords greater diversity in hunting and collecting. Limited activity sites will be found at all elevations; however, upland areas will exhibit little else. As a whole, lower elevation sites will exhibit greater diversity in artifacts and features.

(4) Sites not located in open terrain will favor slopes that range in aspect from northeast through east to southeast. Winter storms in western Wyoming come out of the west, northwest, or north, and shelter to the lee of these directions would have been desirable. Summer winds, which often blow with extreme force and are dry, tend to be out of the southwest. Shelter on northeast-facing slopes would therefore have been desirable. In areas of variable topography, sites will be located on less steep slopes but infrequently on level, unsheltered ground.

(5) Sites in areas of eolian deposition (more common at lower elevations) will frequently occur in direct association with sand dunes. The link between dunes and prehistoric settlement is widely recognized throughout Wyoming and probably reflects a combination of factors including increased availability of economic grasses, occurrence of interdunal ephemeral ponds and artificially elevated water tables, and soft substrata for sleeping and fire pit excavation.

(6) Sites in general will be more numerous in ecologically diverse regions, for example ecotonal areas where major biotic communities converge. An example might be an area of juniper breaks along the boundary between sagebrush steppe and higher woodlands. Such areas yield a greater diversity of economic plant and animal species than elsewhere. They afford greater return for effort expended in procurement, and minimize the risks involved in securing essential foods.

These propositions are rather simplistic, and probably do not account for the full range of environmental variability across the Riley Ridge area or its potential impact on prehistoric settlement. However, they suffice as a basis upon which future investigations can build, and may also be viewed as testable hypotheses to guide future work. Actual predictive capacity in the realm of settlement patterning at Riley Ridge is currently limited in areas that have not already been thoroughly investigated. The level of sophistication will increase in the face of systematic, research-oriented studies.

INTRODUCTION

This chapter addresses potential impacts from the proposed project to the cultural data base and the means of best alleviating adverse effects. Two major topics are discussed: (1) significance criteria; that is, the basis upon which specific prehistoric and historic resources are judged to be significant in the context of existing historic preservation law and the known cultural history of the region; and (2) impact assessment, i.e., perceived impacts to known sites (particularly those that are significant or potentially significant) on the basis of project designs.

ASSUMPTIONS REGARDING SITE SIGNIFICANCE

Definition of the concept of significance as it applies to archaeological and historic sites is one of the most difficult aspects of cultural resource management, and one that spawns more than its share of disagreements among agencies, private industry, and professional archaeologists and historians. The main problem is that significance criteria are usually general in nature and therefore somewhat subjectively applied. This owes to the nearly infinite range of prehistoric and historic site types, and recognition by resource management that overly specific criteria might inadvertantly exclude certain rare or unique sites that should be declared significant.

As applied to cultural resource management, "significant" implies eligibility for inclusion in the National Register of Historic Places. In effect, a site that does not meet National Register eligibility requirements is not significant, at least in the sense that a legal means exists to assure protection, preservation, or some other form of mitigation of adverse impact. The National Register has thus evolved into a management tool, and the standards set by the Register take on life-or-death meaning in the case of resources threatened by certain types of actions.

The National Register (in its modern form) was created by the National Historic Preservation Act (NHPA). NHPA does not specify eligibility criteria although it does make clear that a site need not be of national historic significance to be considered eligible (McGimsey 1971:112). Local, state and regional sites may also be listed, and are thus significant in the legal sense. The phrasing of NHPA is critical with respect to actual management of cultural resources; a site need not be included on the Register to be afforded protection under the law, but must simply meet the requirements of eligibilty. Eligibility criteria are enumerated in 36CFR60 (implementing federal regulations) and consist of the following:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or,
>
> (b) that are associated with the lives of persons significant in our past; or,
>
> (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
>
> (d) that have yielded, or may be likely to yield, information important in prehistory or history.

In order to qualify for National Register eligibility, then, a property must meet two separate types of requirements. It must exhibit integrity of location, design, materials, etc.; and, it must meet one or more of the four additional criteria (Bureau of Land Management 1982:4-4).

It is obvious from their wording that the implementing regulations were written primarily with historic sites in mind. Indeed, guidelines for evaluating historic properties are more finely set than for prehistoric properties, and the range of site types that must be considered is somewhat more predictable. Systematic field research in the western United States generally results in discovery of far more prehistoric/American Indian sites than historic/Euro-American, but eligibility criteria for such resources remain rather ambiguous. Archaeologists most frequently invoke item "d" (above) in significance evaluation: the likelihood of a site to yield information important in prehistory or history. It could be reasonably argued that most or all archaeological sites possess such potential, particularly in the absence of a local or statewide research design that identifies important research problems. However, a professional archaeologist must in each case be able to document not only integrity of condition but also the specific types of information that a site can furnish, and the sorts of research topics or questions that these data might be applied to.

Because of the inherent ambiguity of eligibility criteria as stated in 36CFR60, the Wyoming State Office of the Bureau of Land Management (BLM) and Wyoming State Historic Preservation Office (SHPO) collaborated to produce a set of guidelines in 1982 for significance evaluation of prehistoric and historic sites. The guidelines have not been codified in a cooperative agreement. However, they effectively translate the published criteria into a regional framework, and take into consideration the range of site types usually encountered by archaeologists and historians (Bureau of Land Management 1982). Wisely, the guidelines are not set in absolute terms but rather present categories of resources that are to be considered "generally eligible" or "generally not eligible". It is still incumbent upon the professional in each instance to make a case for significance (eligibility) or non-significance on the basis of integrity, data content, etc.

Archaeological sites in the "generally eligible" class are those properties that "advance our current state of knowledge relating to chronology, cultural relationships, origins, and cultural lifeways of early groups in the area" (Bureau of Land Management 1982:3-1). They comprise:

(1) rock shelters and caves containing cultural materials
(2) pottery scatters
(3) Paleo-Indian sites
(4) communal big game kill sites
(5) prehistoric or proto-historic burials
(6) effigy figures, medicine wheels
(7) petroglyphs and pictographs
(8) multi-component and/or stratified cultural sites, and sites with intact structural remains.

Archaeological sites in the "generally not eligible" class are those that have minimal potential for yielding data important to an understanding of Wyoming prehistory, and include:

(1) flake surface scatters with no features or datable artifacts (density of flakes less than one per square meter)
(2) isolated tools or flakes
(3) isolated fire hearths
(4) isolated cairns
(5) isolated stone circles
(6) isolated roasting pits

The above notwithstanding, it is not possible to pigeonhole all archaeological sites into one category or the other. Judgements as to integrity, dating potential, and potential to provide substantial information about such topics as subsistence, seasonality, settlement patterns, technology, and others must routinely be considered as part of the evaluation process (Bureau of Land Management 1982:3-2).

A "generally eligible" category for historic sites is not given. The "generally not eligible" category consists of sites that are abundant in Wyoming or are of relatively recent age, and include:

(1) modern trash under 50 years of age
(2) isolated campsites under 50 years of age
(3) structures under 50 years of age
(4) isolated vehicle bodies, farm and ranch equipment
(5) cemeteries not associated with other historic sites

In practice, intact portions of 19th century emigrant trails (including cut-offs) are usually considered eligible for the National Register and are handled accordingly by resource managers and professionals in the field.

Significance is rarely a self-evident quality in cultural sites. It is rooted legally in the criteria set forth for eligibility to the National Register of Historic Places and remains, to an extent, an abstract concept. Several years of management experience in Wyoming involving National Register evaluations in the context of energy-related investigations have resulted in the working definitions given above. These definitions provide a standard basis of evaluation of most sites within the Riley Ridge study area. Professional judgement as to significance must accompany all evaluations, and must inevitably preempt standard guidelines on occasion in the light of unique resources and an expanding data base.

IMPACT ASSESSMENT

IMPACT DEFINITIONS

Guidelines for defining the adverse effects of any development on cultural resources are listed by the Advisory Council on Historic Preservation (36CFR800.3). These guidelines are of particular note for historic resources, but are generally relevant to prehistoric as well. They state that adverse effects may consist of:

(1) destruction or alteration of all or part of a property;

(2) isolation from or alteration of its surrounding environment; or

(3) introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting.

The impacts of the development of Riley Ridge Project facilities on cultural resources may be either direct, secondary, or cumulative. Direct impact is defined as one which physically alters or affects any part of a site to its detriment. Direct impacts may include road, pipeline or railroad construction and surface disturbance at drilling sites. The construction of a transmission line tower that substantially alters the visual setting of an historic site illustrates such direct impact. Secondary or indirect impact refers to the threat of physical impact that exists outside project designs. Secondary impacts may result from such factors as increased accessibility to some locations and concomitant increased vandalism and erosion; recreational use of an area in which cultural resources exist; increased commercial and residential construction which result from any major development; and deterioration of architectural features by neglect as a result of abandonment of active ranch or other occupation sites. Increased deterioration of structures and artifacts as a result of the introduction of materials into the atmosphere, especially hydrogen sulfide, also exemplifies secondary impact. Cumulative impact is a nonlocalized form of indirect impact relevant to historical resources, most notably trails. It may occur when a distinctive and limited site type is adversely impacted as a whole, or when groupings of cultural resources are impacted which together have historical or architectural significance. In the former case, the total scientific information available about a cultural group and its activities may be decreased; in the latter case, aesthetic and other cultural values inherent in the group of resources may be eroded.

The assessment of direct and secondary impacts presented in Table 2-I in Appendix D (on file with the BLM) is derived as follows. Any site overlain by a mapped well, right-of-way or other type of facility is deemed to be directly impacted in this analysis, whereas sites lying on either side of a facility (or just in the general well field area) but still within a one-mile buffer zone are deemed to be secondarily impacted. In cases where site lcoations are not mapped an effort has been made to determine impact based on a projected location derived from legal descriptions. Given the tenuity of this endeavor, assessments for this category of sites are frequently "unknown". To illustrate, Exxon's sulfur pipeline from West Dry Basin to the loadout will adversely impact sites 48LN300, LN323, and LN325, among others. Site 48LN300 is an important historic site of emigrant inscriptions along the main route of the Sublette Cutoff that has been determined eligible for inclusion on the National Register. Although none of the site will be directly impacted by Exxon's proposed line, there will be secondary or residual impact to it. Site 48LN323 is a Late Archaic and Late Prehistoric lithic scatter that has been declared potentially eligible after testing. It will be physically altered by Exxon's current right-of-way with the sulfur pipeline passing directly through the site proper. Whether the impact to 48LN325 (a lithic scatter) will eventually be direct or secondary is unknown because no mapped location is available for the site, although it has been determined that it lies within Exxon's right-of-way.

The evaluation of proposed impact is limited to known sites. The term "impact assessment" is not meant to convey in any sense a definitive estimation of the impact of the entire Riley Ridge Project on cultural resources since there are certainly sites as yet unrecorded.

PROBLEMS AND ASSUMPTIONS

Various problems attendant to the impact analysis arise from both project maps and data on known sites. In the former case, slight variation in the location of rights-of-way on various editions of the same map undermine the plausibility of exacting determinations of direct and secondary impact. The even more problematic situation of projecting coverage by transferring schematic rights-of-way from very large-scale maps to usable copies (1=24,000) is created in several cases from lack of adequate maps. Further at issue is a realization that maps delineating facilities at the EIS stage of planning, in addition to being of a somewhat stylized nature and hence not truly compatible with the intricacies of this analysis, are probably subject to any amount of revision.

These variances in the placement of facilities on the maps and in the width at which the rights-of-way of facilities are portrayed (even if slight) are, unfortunately, a problem given the limitations of assessing impact without field reconnaissance. For this reason, not only should special attention be paid to those sites determined to be directly impacted, but, in addition, it should be noted that "secondary" impact may have inadvertantly been applied to sites that in reality will be directly threatened.

As described earlier, assessments of direct and secondary impact to cultural resources are extracted directly from the topographic maps. Where a site falls within the drawn right-of-way or well location, impact is listed as direct; where a site occurs within the one-mile corridor buffering the rights-of-way (but not directly on the illustrated line), or within the general well field area (but not directly on a proposed pad or right-of-way), impact is listed as secondary. Detailed information from each applicant on right-of-way widths and well pad sizes is available to fine-tune the assessments (e.g., 50' right-of-way for Quasar's carbon dioxide pipeline, 100' for Exxon's), but the scale of maps available does not lend itself to such detail. While sites are divided into those subject to direct versus secondary impact, actual impact will depend on how the rights-of-way are staked in the field.

Inconsistent, missing, and often conflicting data on sites already recorded further exacerbate the problems created by map coverage. The purpose of the impact analysis is to identify adverse impact to those sites, prehistoric and historic, known to be potentially significant and hence potentially eligible for nomination to the National Register of Historic Places. All too frequently, clear cut references to significance are lacking as is any mention of the recorder's plan for disposition of the site (see Chapter 1). Without sufficient information to the contrary, it is assumed that these sites are potentially significant, and they are therefore listed in Table 2-I in Appendix D (on file with the BLM) with the explanatory note that there is "no basis on which to assess site's significance".

The extreme of this situation is represented by sites for which information is only available from topographic maps (BLM 1-11 and HS 1-22). Although virtually nothing is known about these sites beyond location and site type, it must be assumed that they are potentially significant until field survey either substantiates or negates the supposition. Furthermore, in many instances recommendations for further work are given but are not accompanied by a National Register evaluation. Less speculation as to the potential eligibility is needed, and "no National Register evaluation" is simply noted for these sites.

A second problem in isolating potentially significant sites for the purpose of the impact study arises from incongruities in site recording. National Register evaluations are often inconsistent with the recorder's recommendations for the site, illustrated most commonly by any of various recommendations for further work accompanied by a National Register evaluation of "not eligible". If in fact a site is not eligible for inclusion on the National Register, no further work can be required prior to clearance since no legal basis exists for protection of the site. It is assumed that if a site requires any form of further work, that work may yield information which could ultimately make the site eligible for nomination to the National Register. In addition to the incongruities that a conflicting recommendation and evaluation create, discrepancies also ensue from a site recorded twice by different contractors. An original recommendation superceded by one of "no further work, not eligible" (e.g. 48SU197) is not considered conflicting data, but an original recommendation for "no further work, not eligible" superceded by an evaluation of potential significance is considered a conflict.

The recorder's intended recommendation for further work and eligibility is always given when that information is available. For a limited number of sites, parenthetical remarks (on Table 2-I in Appendix D) elucidate that intent; in one case (48SW3248) the parenthetical remarks are those of the authors' and serve as a contrast to the recorder's recommendation.

Because of the various uncertainties described above, the compliance plan developed for the Riley Ridge Project includes a provision for the reassessment of a certain group of sites for which simply not enough information is available.

Projected sensitivity areas within the Riley Ridge Project are depicted on Map 2 (map pocket). Areas indicated as sensitive are believed on the basis of existing information to have a higher likelihood of yielding significant prehistoric and/or historic sites than elsewhere. The analysis is of an extremely general nature. For prehistoric sites, it is based on locations of known site concentrations, elevation, and position relative to permanent water sources, sand dunes, major topographic feature, and vegetation ecotones. For historic sites, the analysis is based on proximity to permanent water sources, locations of known sites and site concentrations, and in particular, proximity of historic trail routes. It must be cautioned that statements of cultural resource sensitivity are at best tentative due to an incomplete data base, and do not serve as substitutes for field inventory. Since predictions of sensitivity were made using only limited information, it is expected that many unknown areas of high sensitivity also exist in the project area and have not been included on Map 2.

Certain specific comments are necessary in order to fully explain Map 2. Within the well field projected sensitive areas for both prehistoric and historic sites coincide with major permanent water courses, and thus tend to be linear with a general east west orientation. The South Piney Creek drainage and the northcentral portion of the well field in particular is sensitive because the Lander Cutoff of the Oregon Trail closely follows this stream.

Along the non-well field corridors, numerous small "boxes" are indicated as sensitivity zones for prehistoric and/or historic sites. For the most part, these localities are crossings of permanent water courses. Where a box is indicated as sensitive for historic sites only, the locality indicated is a crossing of a historic trail.

Immediately to the east of the southeastern well field boundary, major corridors extending to the northeast and southeast are indicated as sensitive for both prehistoric and historic sites. These designations were made for a combination of reasons, the main ones being the existence of known sites (particularly prehistoric) and proximity to reliable water sources. This is also true of the northern bend area of the proposed railroad line.

To the south of the well field, an extensive area straddling several corridors in the vicinity of Fontenelle Reservoir is indicated as sensitive for historic sites or, in specific localities, both prehistoric and historic. Several historic trail routes occur here; prehistoric sites are also known to exist. Further, the area is in close proximity to the Green River or major tributaries. Similar factors may be sited with regard to an extensive northeast to southwest trending zone to the northeast of Kemmerer that is sensitive for both prehistoric and historic sites.

Extending north northeast from Opal is a linear zone that is sensitive for historic sites. This area is so designated because it coincides with a historic trail route. A generally north south trending zone near the southern terminus of the proposed railroad line, to the northwest of the town of Green River, is sensitive for prehistoric sites in some areas and historic sites throughout. This zone occurs in the confluence area of the Green and Big Sandy Rivers at historic trail crossings, and exhibits sand dunes in specific areas. Scattered throughout the project area are prehistoric site sensitivity zones of varying sizes and shapes. These areas are known to exhibit a relatively high density of prehistoric cultural materials on the basis of earlier survey or excavation projects. Examples are the zones west and south of Kemmerer, respectively, which include developed coal mines along Oyster Ridge.

POTENTIAL IMPACTS BY PROJECT ACTION

The following discussion presents summary information on known potentially significant sites affected by the Proposed Action and specific alternatives. Tables 1-III and 2-I provide a detailed description of the type of site affected and the project facility causing the impact. Breakdowns further occur between well field units, plant sites, and linear facilities; data on prehistoric and historic sites are combined within each of those categories. Individual facilities along which significant sites are concentrated are mentioned. This brief outline is followed by a review of specific facility impacts on two sites determined to be eligible to the National Register and by discussion of the specific and cumulative effects of the Riley Ridge on historic trails.

Proposed Action

Well Field:

Only 16 prehistoric sites have been recorded within five of the 10 well field units, a number which mainly reflects the fact that only a very small portion (approximately 2.5%) of the area has been surveyed to date. The greatest number of prehistoric sites are found in Mobil's Tip Top unit (9); three sites have been recorded within Exxon's Fogarty Creek unit;

the Lake Ridge and Riley Ridge units each encompass two prehistoric sites; and one is found in the North Riley Ridge unit.

Fourteen historic sites with architectural feature (excluding trails) are located within five well field units. In two of these four units, Darby Mtn. and Sawmill, only historic sites are found. The nature and significance of these historic sites has not been recorded. Any could contain valuable cultural information or could have historical significance not yet recognized. Both the Lander Cutoff and Opal Stage Road occur within the well field area (see discussion following).

Linear Facilities:

The great majority of potentially significant recorded sites occur along the one-mile wide corridors. A total of 156 sites would be affected by these corridors, and individual sites are frequently impacted by more than one facility. Concentrations of potentially significant sites are found along the transmission line from Naughton Power Plant (16); the carbon dioxide and sales gas corridor to Trailblazer (31); the carbon dioxide pipeline from Craven Creek to Mapco (26); the sulfur pipeline to its loadout (10); and the water pipeline from Green River to Craven Creek (13). Trails to be impacted by various corridors are the main route of the Oregon Trail, Overland Trail, Sublette Cutoff, Hams Fork Cutoff, Hams Fork Cutoff variant, Slate Creek Cutoff, Opal Stage Road, Kinney Cutoff, Oregon Trail/Pony Express Route and Bryan to South Pass City and Green River to South Pass City stage routes. As in the well field area, trails are not identified by individual project facilities here and each trail is considered an entity subject to cumulative impact.

Component Alternatives

A total of 163 sites would be affected by the facilities associated with the Component Alternatives. Concentrations of potentially significant sites are found along the railroad to West Dry Basin (17) and along the proposed UP&L transmission line from Naughton Power Plant to the substation (27). Seven historic sites are concentrated along the UP&L transmission line from Naughton Power Plant to the substation and five along the railroad to West Dry Basin.

Buckhorn Alternative

Well Field:

See previous discussion under "Proposed Action".

Linear Facilities:

A total of 113 sites occur along the corridor rights-or-way in this alternative. Twenty-three (23) of these sites will be impacted by more than one line. Large concentrations of potentially significant sites cluster along the transmission line from Naughton Power Plant (19); the carbon dioxide and sales gas corridors to Trailblazer (32); the carbon dioxide pipeline from Craven Creek to Mapco (26); the sulfur pipeline to its loadout (10); and along the water pipeline from Green River to Craven Creek (13). The imprecise nature of defining impacts to historic trails is reviewed in the following discussion.

Shute Creek Alternative

Well Field:

See previous discussion under "Proposed Action".

Non-Linear Facilities:

Only one site (prehistoric) is recorded within this category at the Shute Creek plant site.

Linear Facilities:

A total of 137 prehistoric and historic sites of potential significance are located along the one mile rights-of-way; 36 of these will be adversely impacted by more than one line. The most intense clustering of sites by specific facility is as follows: transmission line from NPP (19); corridor to Trailblazer (24); carbon dioxide pipeline to Mapco (26); sulfur line to loadout (17); water line from Green River (13); carbon dioxide and sales gas branch from Shute Creek (29). A discussion of impact to trails within the corridors has been isolated following this breakdown.

Northern Alternative

Well Field:

See previous discussion under "Proposed Action"

Linear Facilities:

Adverse effects to potentially significant sites could occur in 96 instances with the corridors combined, although only 66 sites will actually be impacted. The greatest threat to these sites will result from the following facilities: transmission line from NPP (19); carbon dioxide and sales gas corridors to Trailblazer (32); sulfur pipeline to loadout (10); water line from Green River (13). Impact to historic trails is referenced below.

Summary

One prehistoric site (48LN1051) and one historic site (48LN300) within the project area have already been determined eligible for the National Register. Because of their unique status, special attention must be paid to rights-of-way that will affect them. Site 48LN1051 will be directly impacted by the railroad spur to Craven Creek in the Proposed Action, Buckhorn and Shute Creek Alternatives; it will be secondarily impacted by UP&L's transmission line to Craven Creek (Proposed Action) and by the transmission line from NPP to Craven Creek (Shute Creek Alternative). Site 48LN300 will be secondarily impacted by the sulfur pipeline to the loadout outlined in the Proposed Action and three alternatives; it will suffer secondary impact from the sulfur branch from Buckhorn in the Buckhorn and Northern Alternatives. Finally, the sour gas line to Craven Creek will secondarily impact 48LN300 in the Proposed Action, Buckhorn and Shute Creek Alternatives.

The single major known historical resource in the well field is the Lander Cutoff of the Oregon Trail, which very likely will receive both direct and indirect impacts. Preliminary reconnaissance has shown that the eastern one-third and other segments of the trail route through the well field have been extensively impacted by previous developments. However, this trail is of such historical importance that the entire route through the well field should be considered a sensitive area until an adequate cultural resource survey is completed. Especially sensitive are those segments of the trail within the Bridger-Teton National Forest, where ruts, emigrant graves and stream fords are distinct. The Snyder Basin Guard Station is sensitive in its own right and is the possible site of Fort Piney. The meadow in the valley of South Piney Creek contains trail remnants and almost surely was an emigrant camping location; this area should be considered sensitive.

The right-of-way and other non-well field facility areas contain 123 segments of historic trails and 33 other "known" historic period sites. The physical nature and exact location of most segments of historic trails are not known, and therefore impacts can not be projected with accuracy. Best available information indicates that pipelines, transmission lines railroad route and other facilities of the Riley Ridge Project will directly impact historic trails in a least 53 locations and indirectly impact those trails in 65 other localities. For present purposes, direct impact is considered to be an actual crossing of a trail, which would likely result in alteration or destruction of a portion of the trail or would result in such visual intrusion that integrity of setting would be lost. Indirect impact is here considered to occur when facilities are constructed within one-half mile of trails segment. Route alternates, campsites, graves and inscriptions commonly occur in association with historic trails, and therefore direct impacts may occur to historic trails in areas other than the known crossing locations. All trail segments within project planning corridors should be considered sensitive.

The Riley Ridge Project as presently planned may comprise a major cumulative effect to historic trails in Wyoming. Project facilities would impact the Overland Trail, the Fort Bridger or main route of the Oregon Trail, the Sublette, Kinney, Lander, Slate Creek and Hams Fork Cutoffs of the Oregon Trail, the Pony Express variation of the Oregon Trail, the Opal to Pinedale stagecoach road, the Bryan to South Pass City stage route, and the Green River to South Pass City stage route. Proposed facilities would directly impact in at least 41 places trails that are assumed to eligible for listing on the National Register. The actual effect of these impacts on the historic trail site type as a whole cannot be determined at this time, but impacts to some sites or segments can be expected to be major erosions of the existing resource base. For example, site 48LN300 contains pristine emigrant inscriptions; destruction of this site would be a major loss to the resource base associated with the overland emigration.

A comprehensive listing of potentially significant sites, prehistoric and historic, and the related impact of Riley Ridge project facilities is presented in Table 2-I (no further consideration is given to sites known to be ineligible for the National Register.) Also enumerated are the recorder's recommendation for each site and a summary of the specific data available on National Register eligibility. Table 2-II provides a breakdown of the impact of Riley Ridge project facilities on historic trails. A listing of National Register eligibility for each trail can be found in Table 1-IV. These tables are all included in Appendix D, on file with the BLM.

CHAPTER 3
METHODOLOGY

Research of cultural resources records comprised three principal tasks. The first consisted of compiling information on investigations conducted in the past which in some way affect Riley Ridge Project plans. Most of this work was accomplished by the project archaeologists. The second task was also conducted by the archaeologists and consisted of amassing records of all known prehistoric/American Indian sites that may be adversely affected by Riley Ridge facilities. Finally, records of known historic/Euro-American resources were researched and compiled by the project historian.

Most records of previously conducted cultural resource investigations are computer-inventoried at the Office of the Wyoming State Archeologist (OWSA) of the Wyoming Recreation Commission (WRC) at the University of Wyoming, Laramie. OWSA thus constituted the primary source for such information. Recent data not yet on file in Laramie were taken from records in the Rock Springs District Office and the Kemmerer Resource Area Office of the Bureau of Land Management (BLM). Records of the Bridger-Teton National Forest, U.S. Forest Service (USFS) were checked as well although no additional projects were listed. A limited number of historical overviews are on file at the State Historical Preservation Office (SHPO) of the WRC in Cheyenne; some are also available at the Coe Library, University of Wyoming, and elsewhere. The locations of all previous investigations were mapped, and information was tabulated in a standard format (Table 1-I in Appendix D).

OWSA also served as the main source of prehistoric site data. Forms for all sites listed on printouts covering the project area were examined, and locations checked against those of proposed project facilities. Known sites potentially affected by the project were plotted, and information compiled in standardized format (Table 1-III in Appendix D). A considerable amount of recent data were also taken from BLM files at the Kemmerer Resource Area and Rock Springs District Offices. In a few instances, information on incomplete (or otherwise inadequate) site forms on file at the locations named above was supplemented by data furnished directly by the original recorders. The Bridger-Teton National Forest was contacted, but again no records were on file that did not also exists at OWSA. The majority of known prehistoric sites were recorded in the course of small-scale energy-related surface investigations by archaeologists, and site data are usually found in minor reports resulting from those projects. A limited number of block surveys encompassing larger areas has also been conducted. Reports of these investigations are on file with OWSA, SHPO, and in the appropriate district or resource area office of the BLM. Virtually no published sources exist for prehistoric sites threatened by the Riley Ridge project. The National Register of Historic Places was consulted although no properties are listed in the Riley Ridge study area.

Personal contacts made during prehistoric site research include Dr. George C. Frison, Wyoming State Archeologist; Mary Feathers and Mary Meyer Hopkins of OWSA; and David Vlcek and Dean Decker of the Kemmerer Resource Area and Rock Springs District Offices of the BLM, respectively.

The historic resources inventory utilized materials from a number of sources. Most general historical information was gathered at the Coe Library of the University of Wyoming, including the special manuscript and local history files maintained in the Hebard Room and the Western History Research Center. The Wyoming Recreation Commission (WRC/SHPO) in Cheyenne provided copies of pertinent research reports, site or site lead forms, records of known cultural resources, and maps of historic trails. Further information about trail locations was found in the records of the Kemmerer Resource Area Office and the Rock Springs District Office of the BLM. The Pinedale Office of the BLM also provided information useful to a field assessment of the Lander Cutoff (following paragraphs).

Information about General Land Office surveys and land entries was found in the public land records of the BLM Wyoming State Office, Cheyenne. General historical information about the Green River region was located in the Wyoming State Archives in Cheyenne. Locations of some historic sites were taken directly from USGS quadrangle maps; several historic trails are so mapped, although the precise routes often remain in doubt. Records of some historic sites were gleaned from OWSA files in Cheyenne. Most are sites that have been recorded by archaeologists in recent years as part of energy-related surveys.

Personal contacts include David Vlcek and Dean Decker (BLM), and Robert Rosenberg and Thomas Marceau of the Wyoming Recreation Commission/SHPO, Cheyenne.

In addition to research of records and documents, the historian performed a reconnaissance of portions of the Lander Cutoff within the Riley Ridge well field (see Chapter 1 and Appendix C). In preparation for fieldwork, USGS quadrangle maps showing trail segments were compared with infrared aerial photographs on file in the Pinedale office of the BLM. Most trail segments were clearly visible on the photographs, but an abundance of other trails or tracks was also evident, especially near the eastern edge of the study area where gas well drilling has occurred. The obliteration of some segments of the trail was evident in the photographs, but the condition of most segments could not be determined without field inspection.

Field methods consisted of driving and walking segments of the trail designated on USGS quadrangle maps, in order to determine the existence and relative integrity of trail ruts. In those areas where the trail was adjacent to or apparently obliterated by more modern roads, the vehicle was stopped at half-mile intervals and an area of about 400 meters in diameter was intensively pedestrian surveyed for ruts or artifactual remains. The area so examined extends westward from the end of pavement in Section 33, T29N, R113W, to the eastern opening of the large meadow to the north of Snider Basin Guard Station. Through most of this area visibility was quite good so that deep or well-defined ruts would likely have been visible at some distance. Two pedestrian transects were made across the meadow to the north of Snider Basin Guard Station. To the west of the guard station the trail is essentially the same as the modern two-track vehicle road to the western edge of T29N, R115W. This segment was driven, except for pedestrian inspection at stream crossings and crossing of ridges. Similar inspection was given to a segment of the trail in Section 33 and 34, T30N, R113W.

The methodology employed in assessing potential impacts to known prehistoric and historic sites is described in the appropriate section of Chapter 2.

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APPENDIX A

WYOMING BASIN AREA RADIOCARBON DATES

APPENDIX A
Wyoming Basin Area Radiocarbon Dates

DATE	SITE NUMBER	REFERENCE	LAB NUMBER
11,830±410	Pine Spring	Sharrock (1966)	GXO-355
11,280±280	U.P. Mammoth	Irwin (1971)	I-499
9695±195	Pine Spring	Sharrock (1966)	GXO-354
9026±118	Finley	Frison (1978)	SMU-250
8950±220	Finley	Frison (1978)	RL-574
7290±115	Maxon Ranch	Creasman (1981)	
6870±120	48Ut372	Bleacher (1982)	Beta-3320
6840±90	Deadman Wash	Armitage et al (1982)	Beta-3924
6600±110	48Cr1946	Sender et al (1982)	Beta-3738
6460±130	48Sw1668	J. Miller (1982)	Beta-3012
6310±210	48Sw1153	J. Miller (1982)	Beta-3139
6270±150	48Cr1946	Sender et al (1982)	Beta-3704
6260±280	48Cr1946	Sender et al (1982)	Beta-3708
6150±120	48Cr1946	Sender et al (1982)	Beta-3705
6000±140	Deadman Wash	Armitage et al (1982)	Beta-3009
5810±130	48Cr1946	Sender et al (1982)	Beta-3706
5750±190	48Cr3405	Sender et al (1982)	Beta-2692
5690±100	48Ut375	Angulski (1982)	Beta-3323
5640±110	48rR936	Creasman (1981)	UGa-2641
5590±120	80-WY-512b	Sender et al (1982)	Beta-2039
5560±100	48Cr3405	Sender et al (1982)	
5560±280	Maxon Ranch	Creasman (1981)	
5530±140	Deadman Wash	Armitage et al (1982)	Beta-3133
5520±70	48Sw1028	Greer et al (1982)	Beta-2744
5490±120	48Ut375	Angulski (1982)	Beta-3322
5490±65	48Na220	Hilman (n.d.)	UGa-2042
5360±100	48Ut375	Angulski (1982)	Beta-2434
5300±110	48Ut370	S. Miller (1982)	Beta-3319
5220±150	Shoreline	Frison (1978)	Rl-689
5130±160	48Cr3482	Van Ness (1981)	Beta-3725
5130±120	48Cr1946	Sender et al (1982)	Beta-3855
5040±160	48Ut63	Metcalf et al (1981)	Rl-1160
4940±80	48Sw1668	J. Miller (1982)	Beta-3013
4820±120	48Cr3722	Vlcek & Merewether(1980)	Beta-2087
4690±70	Halfway Hill 8	Pastor & Lewis (1981)	Beta-2429
4540±110	Scoggin	Frison (1978)	Rl-174
4400±100	48Sw1028	Greer et al (1982)	Beta-2745
4330±140	48Sw142	Metcalf (1975)	Rl-546
4320±180	48Sw2369	Greer (1981)	Beta-2007
4310±120	48Cr3493	Metcalf-Zier (n.d.)	Beta-3772
4260±90	Lay	O'Neil (1980)	UGa-2950
4185±75	Lay	O'Neil (1980)	UGa-2953
4165±70	Lay	O'Neil (1980)	UGa-2952
4150±115	Lay	O'Neil (1980)	UGa-2949
3920±540	48Sw1091	O'Brien (1982)	Beta-3347
3840±210	Deluge Shelter	Leach (1970)	GXO-898

APPENDIX A (continued)

DATE	SITE NUMBER	REFERENCE	LAB NUMBER
3790±80	48Sw3813	Decker & Vlcek (1982)	Beta-3719
3785±90	48Cr513	McGuire & Joyner (1981)	UGa-3629
3635±80	Pine Spring	Sharrock (1966)	GXO-356
3630±85	Deluge Shelter	Leach (1970)	GXO-899
3455±125	Cow Hollow	Schock et al (1982)	UGa-3670
3390±60	48Sw1029	Greer et al (1982)	Beta-2738
3360±180	48Sw1153	J. Miller (1982)	Beta-3141
3355±70	Cow Hollow	Schock et al (1982)	UGa-3568
3260±120	Deluge Shelter	Leach (1970)	GXO-897
3320100	48Sw1457	Greer et al (1982)	Beta-2930
3160±130	48Sw1153	J. Miller (1982)	Beta-3138
3100±90	48Sw3555	Decker & Vlcek (1982)	Beta-3456
3030±120	48Ut390	Reiss & Sanders (1982)	Beta-2445
2870±130	Deadman Wash	Armitage et al (1982)	Beta-3131
2780±190	48Ut375	Angulski (1982)	Beta-2431
2740±100	Deadman Wash	Armitage et al (1982)	Beta-3010
2740±540	48Sw1091	O'Brien (1982)	Beta-3615
2660±50	Cutthroat Spgs	Decker & Vlcek (1982)	Beta-3458
2640±300	Deadman Wash	Armitage et al (1982)	Beta-3124
2590±90	48Sw3268	Greer (1981)	Beta-2095
2580±80	Deadman Wash	Armitage et al (1982)	Beta-3130
2440±140	48Sw2624	Greer (1981)	Beta2084
2410±120	48Sw2369	Greer (1981)	Beta-2006
2380±110	48Ln531	Brock (1981)	Beta-2449
2320±130	48Ln397	Greer (1981)	Beta-1630
2250±100	48Sw2369	Greer (1981)	Beta-2008
2210±180	48Ln771	Sanders et al (1982)	Beta-3808
2140±90	Deadman Wash	Armitage et al (1982)	Beta-3129
2130±90	48Ln484	Sanders et al (1982)	Beta-3380
2070±80	48Sw1091	O'Brien (1982)	Beta-3616
2070±80	48Cr3768	Black (1982)	Beta-5294
2060±110	48Cr3779	Black (1982)	Beta-5295
2010±100	48Sw283	Metcalf (1975)	Rl-547
1975±55	48Sw1229	Creasman (1981)	UGa-2640
1850±70	48Ln297	Greer (1981)	Beta-1632
1845±60	Lost Quarry	Metcalf & Hilman (n.d.)	UGa-2050
1820±80	48Ut375	Angulski (1982)	Beta-2435
1810±70	48Cr3482	Van Ness (1981)	Beta-3726
1775±75	48Sw1184	Creasman (1981)	Uga-2642
1740±60	48Ut390	Reiss and Sanders (1982)	Beta-3324
1735±75	48Sw1229	Creasman (1981)	UGa-2643
1710±200	Deadman Wash	Armitage et al (1982)	Beta-3125
1710±100	48Ln484	Sanders et al (1982)	Beta-3380
1680±80	48Cr2785	Bradley (n.d.)	Beta-3057
1670±60	Lost Quarry	Metcalf & Hilman (n.d.)	UGa-2051
1655±95	48Na215	Hilman (n.d.)	UGa-2043

APPENDIX A (Continued)

DATE	SITE NUMBER	REFERENCE	LAB NUMBER
1640±90	48Sw2049	Decker & Vlcek (1982)	Beta-3449
1625±95	Deluge Shelter	Leach (1970)	GXO-896
1610±50	48Sw2665	Tucker (1982)	Beta-2439
1580±60	48Sw2429	Drews (1981)	Beta-2441
1580±110	Wardell	Frison (1973)	Rl-102
1550±60	48Sw1028	Greer et al (1982)	Beta-2743
1540±90	48Sw2644	Greer (1981)	Beta-2091
1565±70	48Ln297	Greer (1981)	Beta-1631
1530±110	48Sw2302	Tucker (1982)	Beta-2433
1530±80	48Ln760	Decker & Vlcek (1982)	Beta-3459
1515±95	48Ln433	Greer (1981)	Beta-1628
1510±90	48Sw2429	Drews (1981)	Beta-2450
1550±60	48Sw1028	Greer et al (1982)	Beta-2747
1490±60	48Ut199	Tucker (1982)	Beta-2448
1490±60	48Sw3741	Decker & Vlcek (1982)	Beta-3446
1470±100	48Sw212	Metcalf (1975)	Rl-551
1460±100	48Sw3737	Decker & Vlcek (1982)	Beta-3452
1460±75	48Ln398	Greer (1981)	Beta-1629
1450±220	48Ln547	Angulski (1982)	Beta-2432
1440±70	48Sw1028	Greer et al (1982)	Beta-2746
1440±95	48Sw1389	Creasman (1981)	UGa-2975
1440±95	5Mf660	Creasman (1981)	UGa-2975
1415±70	Lost Quarry	Metcalf & Hilman (n.d.)	UGa-2053
1410±60	48Sw2429	Drews (1981)	Beta-2450
1410±50	48Sw2649	Greer et al (1982)	Beta-2828
1410±80	48Ut199	S. Miller (1982)	Beta-2447
1400±60	48Sw2302	Tucker (1982)	Beta-2436
1390±50	48Cr665	Hilman (n.d.)	UGa-2044
1380±60	48Ln787	Sanders et al (1982)	Beta-3813
1375±55	Oyster Ridge	Zier (1982)	UGa-2046
1350±80	Deadman Wash	Armitage et al (1982)	Beta-3127
1350±120	48Cr256	Black (1982)	Beta-5293
1340±60	48Sw1091	O'Brien (1982)	Beta-3349
1340±90	48Ut534	Greer et al (1982)	Beta-2762
1330±80	49Sw1029	Greer et al (1982)	Beta-2742
1320±60	48Ut199	S. Miller (1982)	Beta-2446
1300±60	48Sw1029	Greer et al (1982)	Beta-2739
1310±60	Lay	O'Neil (1980)	UGa-2951
1300±100	48Sw284	Metcalf (1975)	Rl-548
1300±70	48Cr513	McGuire & Joyner (1981)	UGa-3631
1300±50	48Sw2302	Tucker (1982)	Beta-2437
1290±90	48Sw1029	Greer et al (1982)	Beta-2740
1290±80	48Sw1708	S. Miller (1982)	Beta-3316
1280±85	Cow Hollow	Schock et al (1982)	UGA-3296
1270±80	Johnson Canyon	Decker & Vlcek (1982)	Beta-3450
1255±70	48Sw1389	Creasman (1981)	UGa-2975

APPENDIX A (Continued)

DATE	SITE NUMBER	REFERENCE	LAB NUMBER
1240±100	48Sw212	Metcalf (1975)	Rl-550
1240±50	48Sw2599	Greer et al (1982)	Beta-2827
1235±65	48Ln176	Creasman (1981)	UGa-3295
1230±70	48Sw662	Bleacher (1982)	Beta-3772
1230±60	48Sw1091	O'Brien (1982)	Beta-3348
1220±55	48Ln297	Greer (1981)	Beta-1634
1220±50	48Sw3736	Decker & Vlcek (1982)	Beta-3454
1215±85	Deluge Shelter	Leach (1970)	GXO-895
1210±80	48Sw2302	Tucker (1982)	Beta-3314
1210±50	48Sw3396	Decker & Vlcek (1982)	Beta-3455
1200±66	48Sw1558	Creasman (1981)	UGa-3208
1180±60	48Sw3518	Decker & Vlcek (1982)	Beta-3457
1180±140	Deadman Wash	Armitage et al (1982)	Beta-3135
1170±100	Wardell	Frison (1973)	Rl-111
1170±50	48Ut369	S. Miller (1982)	Beta-3318
1170±90	48Sw3740	Decker & Vlcek (1982)	Beta-3447
1160±50	48Sw1708	S. Miller (1982)	Beta-3317
1160±60	48Ln700	Waitkus & Taylor (1981)	Beta-3057
1150±70	48Sw1091	O'Brien (1982)	Beta-3617
1140±80	48Ut390	Reiss & Sanders (1982)	Beta-3325
1130±50	48Sw1389	Creasman (1981)	UGa-2973
1120±80	Deadman Wash	Armitage et al (1982)	Beta-3128
1120±80	48Ln787	Sanders et al (1982)	Beta-3804
1120±50	48Sw1029	Greer et al (1982)	Beta-2741
1115±50	Lost Quarry	Metcalf & Hilman (n.d.)	UGa-2052
1115±55	48Cr660	Hilman (n.d.)	UGa-2045
1110±55	48Sw1389	Creasman (1981)	UGa-2979
1100±70	48Ut390	Reiss and Sanders (1982)	Beta-2444
1100±50	48Ln787	Sanders et al (1982)	Beta-3812
1080±80	48Sw3739	Decker & Vlcek (1982)	Beta-3448
1090±75	487Sw1588	Creasman (1981)	UGa-3210
1090±50	48Sw2599	Greer et al (1982)	Beta-2826
1075±75	48Ln297	Greer (1981)	Beta-1633
1040±60	48Sw2951	Decker & Vlcek (1982)	Beta-3453
1030±85	Deluge Shelter	Leach (1970)	GXO-894
1030±50	48Ln788	Sanders et al (1982)	Beta-3811
1020±100	48Sw155	Metcalf (1975)	Rl-549
1020±90	48Sw2642	Greer (1981)	Beta-2089
1020±60	48Cr1946	Sender et al (1982)	Beta-
995±65	Lay	O'Neil (1980)	UGa-2947
990±100	Wardell	Frison (1973)	Rl-103
980±150	48Ut194	Bleacher (1981)	Beta-2442
980±50	48Ln789	Sanders et al (1982)	Beta-3809
970±70	48Sw1153	J. Miller (1982)	Beta-3140
970±130	48Sw2302	Tucker (1982)	Beta-2438
960±80	48Sw2643	Greer (1981)	Beta-2090

APPENDIX A (Continued)

DATE	SITE NUMBER	REFERENCE	LAB NUMBER
880±80	48Cr3768	Black (1982)	Beta-5293
800±50	48Ln789	Sanders et al (1982)	Beta-3810
780±110	48Cr310	Metcalf (1974b)	Rl-471
700±80	48Sw2643	Greer (1981)	Beta-2092
650±480	48Cr341	Metcalf (1981)	UGa-3536
645±135	Firehole Basin	Metcalf (1979)	UGa-2048
625±50	Firehole Basin	Metcalf (1979)	UGa-2049
555±300	Deadman Wash	Armitage et al (1982)	UGa-3786
510±60	48Ln779	Sanders et al (1982)	Beta-3806
430±70	48Sw3828	Decker & Vlcek (1982)	Beta-34
415±85	48Cr341	Metcalf (1981)	UGa-3534
390±85	48Cr341	Metcalf (1981)	UGa-3537
300±50	Skull Point	McGuire (1977)	UGa-2047
230±100	Eden-Farson	Frison (1971)	Rl-101

APPENDIX B

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

The following catalog has been compiled to allow documentation of actions which may have affected or reflected the history of the well field area of the Riley Ridge Project. The listings in the catalog are taken from entry tract books, the master title index, and surveyors' notes of the General Land Office, now maintained by the Bureau of Land Management in Cheyenne, Wyoming.

The catalog listings indicate the probable proximate locations of some historic period cultural resources. Coal deposit selections (CDS) probably were the site of mining activities at one time, and structural or artifactual evidence may remain on the site. Homestead entries (H.E.), whether eventually patented, relinquished or cancelled, probably at one time included buildings, because a dwelling and other improvements were required by the 1862 Homestead Act and the 1909 Expanded Homestead Act. Desert land entries (DLE) did not require settlement on the tract, but did require improvements for the purpose of irrigation. Cash entries (C.E.) did not require actual residence on the tract as a condition of patent, and therefore there is no indication in the land records of structures or facilities on these tracts. It is likely, however, that the cash entries made before 1900 represented the home place of cattle ranches and that there were substantial buildings on these sites. Stock raising homestead entries (SRHE) required residence on the tract unless the claimant had already established a domicile under the 1862 or 1909 Homestead Acts. Although there are a large number of listings in the catalog, the land area involved in private entries is a small part of the total area of the Riley Ridge EIS area.

The catalog can therefore be used to predict the proximate locations of sites or "sensitive" areas where historic period sites may occur. The catalog by no means indicates all of the possible historic period sites, however. In addition to the pre-settlement themes or eras of the area's history which may have left physical evidence, there may have been line camps for cattle operations and structures or other short-term occupations that were never officially entered upon. Some of the original homestead and ranching units have been consolidated, and new headquarters facilities have been built. Some kinds of sites, such as branding stations or sheep herder camps, usually are not referenced in either the public land records or the available written histories of the region.

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
26	113	3						First oil leases in twp in 1920.
26	113	7	SWNE, SENW, NWSE, NESW	CDS	1/26/1909	Patent to SWNE	12/19/1910	
26	113	7	N½SE, S½NE	CDS	3/22/1888	Cancelled	6/01/1888	
26	113	7	S½SE	CDS	5/21/1888	Cancelled	6/01/1888	
26	113	5 6 7	SWSW and SESE and N½NE	CDS	5/21/1888	Cancelled	6/01/1888	
26	113	7 8	E½SE¼ and S½SW¼	H.E.	8/12/1911	Patent	6/21/1915	
26	113	10 11	SE¼NW, S½NE and SWNW	H.E.	12/23/1915	Relinquished	1/24/1921	
26	113	10	S½SW	H.E.	4/29/1916	Relinquished	12/04/1916	
26	113	10 15	S½SE¼ and N½NE	H.E.	4/29/1916	Relinquished	12/04/1916	
26	113	11 10 11	SENW and S½NE and SWNW	H.E.	4/26/1924	Rejected, allowed, then cancelled.	1/06/1925	
26	113	14 22 23	SESW and NENE and N½NW	DLE	8/03/1914	Suspended Patent	8/17/1914 4/14/1927	
26	113	14	SENW,N½SW,SWSW	DLE	8/03/1914	Relinquished	7/15/1925	
26	113	14	Lots 3 & 4,NWSE Lot 2, SWNE	H.E.	6/21/1922	Patent	3/25/1926	
26	113	10 15	W½SE,SESE,S½SW and W½SW¼	H.E.	4/29/1916	Relinquished	12/04/1916	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
26	113	7	SWNE			Coal Patent	12/19/1910	
26	113	7 8	SE¼ and S½SW¼	H.E.		Patent	6/21/1915	
26	113	10 11	S½NE¼, SENW and SWNW	H.E.	12/23/1915	Relinquished	1/24/1921	
26	113	10	S½SW¼	H.E.	4/29/1916	Relinquished	12/04/1916	
26	113	2	Lots 7,8,10,11	H.E.		Patent	2/02/1920	
27	113	5 6	Lots 2,3,4 and Lot 1	H.E.	7/05/1921	Relinquished	7/03/1922	
27	113	5 6	Lots 3,4,SWNW and SENE	H.E.	8/05/1925	Relinquished	2/23/1932	
27	113	5 6	Lots 2,3,4 SWNW and Lots 1-5 SENW, S½NE	Stock Raising Homestead	12/10/1931	Patent	10/06/1939	
27	113	18 19	SESE and E½NE, NESE	CDS	4/23/1909	Cancelled	4/11/1912	
27	113	19	SE¼	CDS	8/16/1912	Cancelled	No date	
27	113	19	W½NE,W½SE,SWNE, W½SE	CDS	6/02/1917	Rejected Closed	6/02/1917 12/04/1920	
27	113	19	SESE	CDS	9/03/1918	Cancelled	No date	
27	113	19	SWNE,W½SE,SESE	CDS	2/21/1920	Cancelled	No date	
27	113	19 30 31	SENW,SWNE,E½SW, W½SE and NE¼,E½SE¼ and NE¼NE¼	CPP	4/11/1913	Rejected, Case closed	8/31/1922	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
27	113	32	SENE, NESE	CDS		Cash Patent	11/11/1916	Cash Coal conversion of CDS of 1915.
27	113	32	S½SW¼, SWSE	CDS	7/15/1922			
27	113	32	SW¼	CDS	5/28/17	Relinquished, all but SESW SESW Cash coal Patent	6/07/1918 3/20/1919	
27	113	28	N½SW, SWSW, NWSE	C.E.		Patent	3/09/1891	
27	113	28	SWNE, S½NW	H.E.		Patent	4/22/1912	
27	113	33 32	S½SW and SESE	C.E.		Patent	8/29/1914	
27	113	32	SENE, NESE	C.E.		Patent	11/11/1916	
27	113	33	S½NW, N½SW	H.E.	6/16/1917	Cancelled	7/19/1918	
27	113	32	SESW	C.E.		Patent	3/20/1919	
27	113	6	Lot 1	H.E.	7/05/1921	Relinquished	7/03/1922	
27	113	33	SENE, N½SW	SRHE	6/22/1922	Cancelled	11/05/1924	
27	113	19	W½SE, SESE	C.P.	6/23/1922	Cancelled	6/22/1924	
27	113	28	SENE, NESE	SRHE	11/14/1924	Cancelled	5/29/1933	
27	113	6	SENE	H.E.	7/14/1926	Relinquished	2/23/1932	
27	113	29	All	SRHE	3/03/1931	Cancelled	9/22/1936	
27	113	28 33 34	SESW, S½SE and N½NE, N½NW and NW½	SRHE		Patent	5/01/1931	
27	113	6	NESW	H.E.	4/10/1934	Relinquished	10/17/1934	
27	113	6	S½NE, SENW and Lots 1-5	SRHE	9/23/1938	Cancelled then Patented	10/06/1939	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
28	113	7	Lot 4	CDS CDS	7/09/1909 9/18/1912	Cancelled Relinquished	2/17/1911 9/15/1913	
28	113	7	Lots 3 & 4	CDS	2/18/1916			
28	113	7	Lots 3 & 4	CPP	8/15/1925	Suspended and Closed	5/21/1926	
28	113	31	SWNE,SENW,N½SE	H.E.	10/03/1890	Cancelled	11/11/1893	
28	113	27 28	S½NW,NWNW and NENE	H.E.		Patent	1/29/1891	
28	113		N½SE¼,N½SW¼	C.E.		Patent	8/19/1891	
28	113	24	S½NE,S½NW	C.E.		Patent	3/17/1892	
28	113	31	SWNE,SENW,N½SE	C.E.		Patent	10/15/1895	
28	113	27	N½NE,SWNE,NENW	H.E.		Patent	10/25/1897	
28	113	20 21	E½NE and W½NW	H.E.	6/05/1889	Cancelled	7/14/1909	
28	113	28 32 33	SWNE,SENW,N½SW, SWSW and E½NE and NWNW	D.L.E.	7/01/1903	Cancelled	9/11/1911	
28	113	32	SESW,W½SE,SESE	H.E.	9/28/1912	Relinquished	4/01/1915	
28	113	30 31	Lot 4 and Lots 1,2	H.E.	8/04/1913	Cancelled	7/20/1916	
28	113	31 32	S½SE and W½SW	H.E.	1/05/1917	Cancelled	6/19/1923	
28	113	30 31	Lot 4 and Lots 1,2	H.E.	6/12/1917	Relinquished	8/31/1921	
28	113	23 24	S½SE and S½SW	H.E.	2/18/1919	Cancelled	5/03/1923	
28	113	17	S½SW,NWSW	H.E.		Patent	9/24/1919	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
28	113	22 23	SESE and S½SW,NESW	H.E.		Patent	12/09/1919	
28	113	28	W½NE,SENW,NESW	H.E.	2/05/1920	Cancelled	12/06/1926	
28	113	24	N½SE¼	H.E.	6/13/1921	Cancelled	8/03/1922	
28	113	32	E½NE,E½SE	H.E.	7/05/1921	Relinquished	7/03/1922	
28	113	21	W½NW¼	H.E.		Patent	8/04/1921	
28	113	18	N½SE¼	H.E.	11/02/1921	Cancelled	3/03/1923	
28	113	32	E½SW,W½SE	H.E.		Patent	1/26/1925	
28	113	21	N½SW,SESW,SWSE	H.E.		Patent	4/28/1927	
28	113		Tracts 51,A,B,C	D.L.E.		Patent	3/23/1928	
28	113	18	NWSE	H.E.	10/01/1928	Relinquished	12/11/1931	
28	113	28	Tract 5,50,A,B, C	H.E.	8/30/1932	Relinquished	8/04/1934	
28	113	18	W½SE	H.E.		Patent	5/25/1938	
28	113	24	Tracts 46,A,B,	H.E.		Patent	12/12/1938	
28	113	23	Lots 5,6	C.E.		Patent	10/16/1939	
30	113	1	E½NW¼,NESW,NWSE, SWSE	Application of right of way for the sixty-seven reservoir and ditches	1/08/1910	Approved	4/06/1911	
30	113	12	W½NE,SENE,NESE	Application for a right of way subject to right of sixty seven reservoir and ditches	1/08/1910	Approved	4/06/1911	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	113	31 32	E½SE¼ and S½SW¼	H.E.	5/20/1889	Cancelled	10/05/1907	
30	113	1	N½SW¼ ,SE¼SW¼, SW¼SE¼	C.E.	11/11/1898	Patent	11/11/1898	
30	113	29 30 31	NW¼SW¼ and E½SE¼ and NE¼NE¼	H.E.		Patent	3/24/1899	
30	113	19 30	Lot 4 and W½NE¼, E½NW¼	DLE	4/05/1900	Cancelled	11/14/1911	
30	113	30 31 32	SE¼SW¼ and S½NE¼,NW¼NE¼ NE¼NW¼ and SW¼NW¼, NW¼SW¼	C.E.		Patent	8/21/1900	
30	113	2	Lot 1	C.E.		Patent	8/08/1901	
30	113	32	SW¼NE¼, NE¼NW¼ SE¼NW¼, NE¼SW¼	H.E.	5/19/1902	Relinquished	7/06/1908	
30	113	1	Lots 1,2,3,4	C.E.		Patent	7/03/1902	
30	113	1 1 12	S½NE¼, S½NW¼ and N½SE¼, SE¼SE¼ and NE¼NE¼	C.E.		Patent	3/12/1903	
30	113	33	SE¼NE¼,SW¼NW¼, W½SW¼	H.E.	6/08/1903	Cancelled	6/20/1905	
30	113	29 32	S½SW¼,SW¼SE¼ and NW¼NW¼	H.E.	5/31/1904	Relinquished	3/09/1910	
30	113	30	NE¼SW¼,W½SE¼	H.E.		Patent	12/30/1905	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	113	32	SW¼NE¼,E½NW¼ NE¼SW¼	DLE	7/06/1908	Cancelled	5/23/1916	
30	113	32	SE¼ Entire	H.E.		Patent Supplemental Patent	10/27/1910 1/22/1917	
30	113	30	W½NE¼,SE¼NW¼	H.E.	11/24/1911	Relinquished	7/10/1914	
30	113	32 33 33	SE¼NE¼ and SW¼NW¼ and W½SW¼	C.E.		Patent	3/18/1912	
30	113	31 32	E½SE¼ and S½SW¼	C.E.		Patent	3/25/1916	
30	113	32	Entire SE¼	Supplemental H.E.		Patent	1/22/1917	
30	113	29 32	S½SW¼,SW¼SE¼ and NW¼NW¼	H.E.		Patent	3/27/1917	
30	113	30	W½NE¼,SE¼NW¼	H.E.		Patent	8/09/1918	
30	113	33	SE¼NE¼,SW¼NW¼ W½SW¼	Supplemental C.E.		Patent	4/10/1919	
30	113	19 30	Lot 4 and NE¼NW¼	DLE		Patent	1/24/1920	
30	113	32	SW¼NE¼,E½NW¼ NE¼SW¼	H.E.		Patent	3/12/1921	
30	113	19	E½SW¼	H.E.	9/04/1928	Relinquished	2/28/1933	
30	113	31	E½SW¼	SRHE	6/21/1933	Cancelled	10/10/1938	
30	113	19	E½SW¼	SRHE	8/18/1933	Cancelled	1/26/1939	
30	113	30 31	SE¼NE¼ and SE¼NW¼,NW¼SE¼	C.E.		Patent	8/29/1933	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	113	12	S½NE¼,NW¼NE¼ N½NW¼	SRHE		Patent	5/26/1938	
30	113	33	NE¼SW¼,SE¼SW¼ Entire SE¼	SRHE		Patent	8/06/1938	
30	113	33	NE¼SW¼,SE¼SW¼ Entire SE¼	SRHE		Patent	1/23/1942	
29	113	12	S½NE,N½SE	C.E.		Patent	3/15/1898	
29	113	12	NWNE,E½NW	C.E.		Patent	3/15/1898	
29	113	8 9 7	S½SE and SWSW and E½NW,NWNE	C.E.		Patent	11/11/1898	
29	113	11	S½NE,S½NW	C.E.		Patent	11/11/1898	
29	113	12 13	S½SE and N½NE	C.E.		Patent	11/11/1898	
29	113	11	SE¼	C.E.		Patent	11/11/1898	
29	113	5 8	SESW and NWNE,N½NW	C.E.		Patent	8/21/1900	
29	113	5	S½NW,N½SW,SWSW	C.E.		Patent	8/21/1900	
29	113	18	SESW,N½SE,SWSE	H.E.		Patent	8/12/1901	
29	113	11 12	N½NE¼ and W½NW¼	C.E.		Patent	12/12/1901	
29	113	11	S½SW¼	H.E.		Patent	1/17/1902	
29	113	12	NENE	H.E.		Patent	3/25/1902	
29	113	6 7	SESW¼ and NENW¼	H.E.		Patent	3/25/1902	
29	113	7	W½NE¼,SE¼NW¼	DLE		Patent	3/29/1902	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	113	8	SE¼NW¼,NE¼SW¼ N½SE¼	C.E.		Patent	3/29/1902	
29	113	6	NE¼SW¼,W½SE¼	C.E.		Patent	3/29/1902	
29	113	5	SW¼NE¼,W½SE¼	H.E.		Patent	1/31/1903	
29	113	4 5 9	S½SW¼,NW¼SW¼ and N½SE¼ and N½NW¼ SE¼NW¼	C.E.		Patent	11/02/1903	
29	113	4 9	S½SE¼ and Entire NE¼	C.E.		Patent	2/25/1904	
29	113	10	N½NE¼,SW¼NE¼ N½NW¼,SE¼NW¼	C.E.		Patent	2/25/1904	
29	113	10	NE¼SW¼,S½SW¼ SW¼SE¼	H.E.		Patent	4/04/1904	
29	113	7	NE¼SW¼,NW¼SE¼	H.E.	7/19/1904	Cancelled	11/07/1911	
29	113	13	NE¼NW¼	H.E.		Patent	12/20/1904	
29	113	8	SW¼NW¼	H.E.		Patent	5/09/1905	
29	113	9	NE¼SW¼,SE¼SW¼ W½SE¼	H.E.		Patent	9/11/1905	
29	113	9 10	E½SE¼ and SW¼NW¼,NW¼SW¼	C.E.		Patent	10/13/1905	
29	113	4 5	SW¼NW¼ and SE¼NE¼	C.E.		Patent	12/30/1905	
29	113	6	S½NE¼,E½SE¼	C.E.		Patent	6/30/1906	
29	113	6	SE¼NE¼	C.E.		Patent	12/23/1907	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	113	15	N½NE¼,N½NW¼	C.E.		Patent	3/30/1908	
29	113	8	S½SW¼,NW¼SW¼	C.E.		Patent	3/22/1909	
29	113	13 14	NW¼NW¼ and N½NE¼,NE¼NW¼	C.E.		Patent	4/08/1909	
29	113	11	N½SW¼	C.E.		Patent	4/20/1909	
29	113	8 9	E½NE¼ and SW¼NW¼,NW¼SW¼	H.E.		Patent	5/17/1909	
29	113	1	SE¼NE¼, SE¼	C.E.		Patent	3/21/1910	
29	113	5 6	Lot 4 and Lot 1,2,3	DLE	6/01/1912	Cancelled	6/19/1915	
29	113	10	SE¼NE¼,NW¼SE¼	C.E.		Patent	10/29/1912	
29	113	11	N½NW¼	C.E.		Patent	9/18/1918	
29	113	18 19	Lot 4 and Lot 1	DLE		Patent	1/06/1919	
29	113	6	Lots 2,3,4	SRHE	3/21/1933	Cancelled	10/10/1938	
29	113	7 17 18	S½SE¼ and W½NW¼,NW¼SW¼ and NE¼,N½SW¼, SE¼NW¼	SRHE	7/19/1933	Cancelled	3/19/1941	
29	113	4	SE¼NE¼,SE¼NW¼ NE¼SW¼	H.E.		Patent	8/01/1938	
29	113	4	NE¼SE¼	H.E.		Patent	4/11/1940	
29	113	4	SW¼NE¼,SE¼NW¼ NE¼SW¼,NW¼SE¼	SRHE		Patent	1/23/1942	
29	113	8	SE¼NE¼	PS		Patent	6/05/1952	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	113	3	NE¼SW¼,N½SE¼ SW¼SE¼	DLE		Patent	1/10/1956	
29	113	17	NW¼SW¼	DLE		Patent	1/14/1960	
26	114	1 2 11	SW¼NW¼ and E½SE¼ and NE¼NE¼	H.E.	6/05/1912	Cancelled	6/05/1920	
26	114	1 2 11	SW¼SW¼ and E½SE¼ and NE¼NE¼	H.E.	9/04/1920	Relinquished	12/03/1921	
26	114	1 2 11	SW¼SW¼ and E½SE¼ and NE¼NE¼	H.E.	12/03/1921	Relinquished	9/10/1923	
27	114	31	S½NE¼,NW¼NE¼ NE¼SE¼	DLE	4/18/1910	Cancelled	2/24/1915	
27	114	1	S½NW¼	H.E.		Patent	3/02/1926	
27	114		S½NE¼	H.E.		Patent	8/06/1926	
27	114	24 23 14 13	W½NW¼ and NE¼,E½NW¼ and E½SW¼,SE¼ and W½SW¼	SRHE	10/10/1927	Relinquished	10/12/1932	
27	114	2	All	SRHE	3/21/1933	Cancelled	10/19/1938	
27	114	17	½ Section Lots 2,3,6,7,10, 11,14,15	SRHE	7/19/1933	Cancelled	12/06/1938	
27	114	1	E½SE¼	H.E.	4/10/1934	Relinquished	10/17/1934	
27	114	13 14 23 24	W½NW¼,W½SW¼ and E½NE¼,E½SE¼ and E½NE¼,E½SE¼ and W½NW¼, W½SW¼	SRHE	4/10/1934	Cancelled	9/28/1939	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
27	114	22 23 26	S½NE¼,SE¼NW¼ NE¼SW¼,SE¼SW¼ SE¼ and SW¼NW¼,SW¼ and W½NW¼	SRHE	4/10/1934	Relinquished	5/13/1939	
27	114	26 14 15 23	W½NW¼ and S½NW¼,SW¼NE¼ SW¼,W½SE¼ and SE¼NE¼,E½SE¼ and E½NW¼,W½NE¼	SRHE	4/10/1934	Relinquished	5/02/1939	
27	114	23 26 34 35	SW¼SE¼ and W½NE¼ E½NW¼,SW¼ and NE¼SE¼ and NW¼,N½SW¼	SRHE	4/10/1934	Cancelled	1/25/1940	
27	114	11 12	S½NE¼,S½NW¼ N½SW¼, N½SE¼ and NENE,S½NE,S½NW N½SW,SWSE	SRHE		Patent	8/29/1934	
28	114	12	E½SE¼	CLE	6/01/1931	Suspended, Rejected and Closed	1/21/1932	
28	114	1 12 12	S½SE¼ and N½NE¼ NWNE	CDS CDS	10/03/1914 9/08/1915	Withdrawn Withdrawn	5/12/1916 5/12/1916	Application to purchase
28	114	7 12	Lots 3,4 28-113, E½SE¼	CDS	2/18/1916	Relinquished	7/05/1916	28-114 filed.
28	114	12 12	NE¼ N½NE¼	CC CC	5/12/1916 5/12/1916	Cancelled Accepted	4/05/1924 7/05/1916	Application for purchase.

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
28	114	25	SE¼SE¼	H.E.	8/04/1913	Relinquished	7/20/1916	
28	114	25	SE¼SE¼	H.E.	7/12/1917	Relinquished	8/31/1921	
28	114	14	S½NE¼,NW¼NE¼	H.E.		Patent	5/21/1919	
28	114	25 26	SW¼SW¼ and N½SE¼,SE¼SE¼	H.E.	7/01/1919	Relinquished	9/29/1921	
28	114	26 27	S½NW¼,NW¼NW¼ and NE¼NE¼	H.E.		Patent	10/16/1922	
28	114	25	N½SW¼,SE¼SW¼ NW¼SE¼	DLE	2/13/1923	Relinquished	6/24/1926	
28	114	26	NE¼SW¼,N½SE¼ SE¼SE¼	H.E.		Patent	8/06/1926	
28	114	10 11 14 15 22 23	E½SE¼ and W½SW¼ and W½NW¼,W½SW¼ and E½NE¼,E½SE¼ and E½NE¼ and W½NW¼	SRHE	11/14/1927	Relinquished	5/03/1934	
28	114	25	SE¼SE¼	DLE		Patent	3/23/1928	
28	114	10 15	NE¼,E½NW¼ E½SW¼,W½SE¼ and W½NE¼,NW¼	SRHE	4/12/1929	Cancelled	4/24/1931	
28	114	13 14 23	SW¼,W½SE¼ and E½NW¼ E½SW¼,SE¼ and E½NW¼	SRHE	1/12/1931	Cancelled	11/14/1931	
28	114	10 15	W½NE¼,NW¼, SE¼SW¼, W½SE¼ and W½NE¼,NW¼	SRHE	7/14/1931	Relinquished	9/07/1932	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
28	114	10 15	E½,SE¼SW¼, W½SE¼ and W½NE¼,E½NW¼ SW¼NW¼	SRHE	9/07/1932	Cancelled	12/19/1936	
28	114	3 4	Lots 7,8,9,10, 15,16,17,18,19 and Lots 5,12,13,20	SRHE	3/21/1933	Relinquished	4/24/1934	
28	114	9	All	SRHE	7/19/1933	Cancelled	4/17/1939	
28	114	27 34	W½SE¼ and W½NE¼	SRHE	8/18/1933	Relinquished	6/12/1934	
28	114	26	S½SW¼,NW¼SW¼ SW¼SE¼	H.E.	8/23/1923	Relinquished	9/21/1938	
28	114	15 22	W½SE¼ and W½NE¼	C.E.		Patent	10/31/1933	
28	114	35	All	SRHE		Patent	1/02/1935	
28	114	23 24 24	NE¼ and N½ SE¼	SRHE		Patent	7/17/1936	
28	114	13 14	SW¼ and E½NW¼,E½SW¼ SE¼	SRHE		Patent	9/23/1938	
28	114	22 23 27 34	SE¼ and SW¼SW¼ and S½NE¼,NW¼NE¼ E½SE¼ and E½NE¼	SRHE		Patent	2/23/1940	
28	114	4	Lot 6,7,8,9,10, 11,14,15,16, 17,18,19	SRHE		Patent	4/25/1940	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
28	114	25 26	SW¼NW¼,N½SW¼ NW¼SE¼ and S½NE¼,NW¼NE¼ NE¼NW¼	DLE		Patent	7/12/1941	
28	114	8 17	Lot 20 and Lots 1,2,3,4,5,8,9,10,11,12,13,17,18	SRHE		Patent	8/08/1941	
29	114	12 1	S½NE¼,NE¼NE¼ and SE¼SE¼	H.E.		Patent	2/12/1903	
29	114	12	NE¼SE¼	H.E.	7/19/1904	Cancelled	11/13/1911	
29	114	11 12	SE¼NE¼ and S½NW¼,NE¼SW¼	H.E.	9/20/1905	Cancelled	2/19/1930	
29	114	11 12	N½NE¼ and N½NW¼	C.E.		Patent	10/09/1906	
29	114	1 12	S½NE¼,N½SE¼ SW¼SE¼ and NW¼NE¼	C.E.		Patent	12/23/1907	
29	114	1 2	S½SW¼ and SE¼NW¼,NE¼SW¼ SE¼SW¼,S½SE¼	C.E.		Patent	2/13/1908	
29	114	2 3	W½SW¼ and E½SE¼	H.E.	1/11/1909	Relinquished	6/05/1912	
29	114	13	SE¼NE¼	DLE	12/29/1910	Cancelled	4/25/1914	
29	114	12	N½SE¼	H.E.		Patent	4/08/1914	
29	114	24 25	N½SE¼,SW¼SE¼ and NW¼NE¼	H.E.	7/05/1916	Cancelled	9/21/1922	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	114	2	SW¼NE¼,NW¼SE¼	C.E.		Patent	11/07/1916	
29	114	35	S½NE¼,NW¼SE¼	H.E.	6/16/1917	Relinquished	7/31/1920	
29	114	24	E½NE¼	DLE		Patent	1/06/1919	
29	114	24 25 26 35	SE¼SW¼ and SW¼NE¼,E½NW¼ SW¼NW¼,SW¼ and E½SE¼ and NE¼NE¼	SRHE	1/13/1921	Cancelled	7/22/1926	
29	114	35	S½NE¼,NW¼SE¼	H.E.	1/21/1921	Cancelled	10/22/1926	
29	114	2 3	W½SW¼ and N½SE¼	H.E.		Patent	1/21/1921	
29	114	3 4 8 9	SW¼ and S½SE¼ and N½SE¼ and N½NE¼,SW¼NE¼ E½NW¼,SW¼NW¼ N½SW¼	SRHE	4/19/1921	Cancelled	1/27/1926	
29	114	15	All	SRHE	4/28/1921	Relinquished	5/27/1925	
29	114	27 34 35	S½SE¼ NE¼, N½SE¼ NW¼, N½SW¼	SRHE	6/22/1923	Cancelled	1/25/1929	
29	114	12	SE¼NE¼,S½NW¼ NE¼SW¼	H.E.		Patent	2/07/1924	
29	114	14 15	N½ and N½	H.E.	1/30/1926	Relinquished	8/14/1933	
29	114	3 4 8 9	SW¼ and S½SE¼ and N½SE¼ and W½NE¼,NE¼NE¼ E½NW¼,N½SW¼	SRHE	4/03/1926	Relinquished	8/03/1931	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	114	2 3 4	SW¼NW¼ and S½NE¼,S½NW¼ and S½NE¼,SENW¼ E½SW¼	SRHE	12/13/1926	Cancelled	5/12/1932	
29	114	4 5 8	SW¼NW¼,NW¼SW¼ and S½NE¼,SENW, NESW,SESW,SE¼ and E½NW¼,NE¼NW¼	SRHE	12/09/1927	Relinquished	5/04/1929	
29	114	10	All	SRHE		Patent	9/15/1931	
29	114	11 12	W½, SE¼ and W½SW¼,SE¼SW¼ SW¼SE¼	SRHE		Patent	4/12/1932	
29	114	35	S½NE¼, NW¼SE¼	H.E.		Patent	12/28/1932	
29	114	35	N½NE¼,NW¼,N½SW¼ NE¼SE¼	SRHE		Patent	12/28/1932	
29	114	1 2	S½NW¼,N½SW¼ and SE¼NE¼,NE¼SE¼	SRHE	3/21/1923	Cancelled	10/10/1938	
29	114	22	S½NE¼,S½NW¼ SW¼,SE¼	SRHE	2/24/1934	Cancelled	4/01/1940	
29	114	3	S½SE¼	C.E.		Patent	10/17/1934	
29	114	3 4 8 9	SW¼ and S½SE¼ and N½SE¼ and W½NE¼,NE¼NE¼ E½NW¼,SW¼NW¼ N½SW¼	SRHE		Patent	2/25/1936	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	114	24 25	SE¼SW¼,SE¼ and NE¼,E½NW¼,NE¼SW¼ SE¼	SRHE		Patent	6/15/1937	
29	114	25 26 27 34 34	W½SW¼ and S½SW¼,S½SE¼ and S½SE¼ and NE¼ N½SE¼	SRHE		Patent	11/11/1937	
29	114	15 22	S½ and N½NE¼,N½NW¼	SRHE		Patent	8/28/1939	
29	114	2 3 4	Lot 4 and SW¼NE¼,S½NW¼ and S½NE¼,S½NW¼, N½SE¼	SRHE		Patent	8/20/1940	
30	114	23	SW¼NE¼,N½NW¼, SE¼NW¼	H.E.	5/20/1899	Relinquished	5/29/1911	
30	114	25	NE¼NE¼	DLE	4/05/1900	Cancelled	11/11/1911	
30	114	27 34	S½SW¼ and NW¼NE¼, NE¼NW¼	DLE	8/01/1901	Cancelled	4/27/1908	
30	114	16	E½NE¼, NW¼NE¼, NE¼NW¼	H.E.		Patent	1/17/1902	
30	114	25	S½NE¼,NW¼NE¼ NE¼NW¼	C.E.		Patent	7/03/1902	
30	114	34 35	SE¼NE¼ and SW¼NW¼, N½SW¼	DLE	4/16/1903	Cancelled	4/03/1908	
30	114	25	E½SE¼	DLE	1/28/1904	Cancelled	4/19/1910	
30	114	14	S½SW¼,SW¼SE¼	C.E.		Patent	2/16/1905	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	114	15 22	S½SE¼,NW¼SE¼ and NE¼NE¼	H.E.		Patent	3/08/1905	
30	114	23	SE¼NE¼,NE¼SW¼ N½SE¼	C.E.		Patent	12/30/1905	
30	114	15	S½NW¼,N½SW¼	C.E.		Patent	12/30/1905	
30	114	8 9	E½SE¼ and S½SW¼	H.E.		Patent	12/06/1906	
30	114	34 35	E½SE¼ and S½SW¼	C.E.		Patent	10/29/1908	
30	114	28	SE¼SE¼	H.E.	1/11/1909	Relinquished	8/05/1912	
30	114	24	SW¼, S½NW¼ NW¼NW¼	C.E.		Patent	12/16/1909	
30	114	24	SE¼	C.E.		Patent	6/27/1910	
30	114	28	E½SE¼, NW¼SE¼	DLE	12/08/1910	Relinquished	6/05/1912	
30	114	14 15	N½SW¼ and NE¼SE¼	C.E.		Patent	7/06/1911	
30	114	22 23	S½NE¼ and SW¼NW¼, NW¼SW¼	C.E.		Patent	2/23/1912	
30	114	15 22	SE¼SW¼ and NW¼NE¼,NE¼NW¼	C.E.		Patent	8/01/1912	
30	114	25	E½SE¼	C.E.		Patent	8/20/1914	
30	114	11	SW¼NE¼,NE¼SW¼ N½SE¼	H.E.	8/02/1915	Cancelled	9/13/1916	
30	114	35	SW¼SE¼	C.E.		Patent	8/07/1916	
30	114	23	SW¼NE¼, E½NW¼, NW¼NW¼	H.E.		Patent	1/26/1917	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	114	23	NW¼NE¼	C.E.		Patent	2/16/1917	
30	114	25 22	SW¼SW¼ and NW¼NW¼	C.E.		Patent	7/29/1918	
30	114	21 22	E½NE¼ and S½NW¼	C.E.		Patent	8/16/1918	
30	114	14 15	N½SW¼ and NE¼SE¼	Supplemental C.E.		Patent	9/05/1918	
30	114	25	E½SE¼	S.C.E.		Patent	9/05/1918	
30	114	9	SE¼	H.E.		Patent	2/18/1919	
30	114	27 34 35	S½SW¼ and N½NE¼, SENE, NENW and SWNW, NWSW	DLE		Patent	3/26/1919	
30	114	2 3	W½SW¼ and N½SE¼	H.E.		Patent Cancelled	6/09/1919 1/04/1921	
30	114	25	NE¼NE¼	DLE		Patent	1/24/1920	
30	114	11	SW¼NE¼,NE¼SW¼ N½SE¼	H.E.		Patent Patent	9/10/1920 5/05/1933	
30	114	7	NE¼	DLE		Patent Patent	3/03/1921 6/02/1921	
30	114	7	E½NW¼	DLE		Patent	3/03/1921	
30	114	8	S½NW¼,NE¼SW¼ NW¼SE¼	H.E.		Patent	3/23/1921	
30	114	10 14 15	SE¼SE¼ and W½NW¼ and NE¼NE¼	C.E.		Patent	4/15/1921	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	114	14	SW¼NE¼, SE¼NW¼ NW¼SE¼	C.E.		Patent	6/22/1921	
30	114	25 26	S½NW¼,NW¼NW¼ SW¼, SW¼SE¼ and NE¼, SE¼	SRHE	9/18/1922	Cancelled	3/27/1928	
30	114	34 35	NE¼NE¼ and SE¼SE¼	SRHE	10/19/1925	Cancelled	2/16/1929	
30	114	33	SW¼, SE¼	SRHE	1/30/1926	Relinquished	1/05/1931	
30	114	32	SW¼SE¼	SRHE	12/09/1927	Relinquished	5/04/1929	
30	114	20 21	NE¼,N½SE¼ and W½NE¼, NW¼,N½SW¼ N½SE¼	SRHE		Patent	12/21/1927	
30	114	4 9	S½SW¼ and N½, N½SW¼	SRHE		Patent	2/18/1930	
30	114	28	SE¼	H.E.	3/11/1932	Relinquished	7/13/1933	
30	114	20 29 32	S½SW¼ and W½ and NW¼,N½SW¼	SRHE	9/14/1932	Relinquished	5/29/1933	
30	114	22 27	SW¼ and N½, N½SW¼, N½SE¼	SRHE		Patent	11/19/1932	
30	114	26 27 35	S½SW¼, S½SE¼ and S¼SE¼ and NE¼, E½NW¼, NW¼NW¼, NE¼SW¼ N½SE¼	SRHE		Patent	3/29/1933	
30	114	12	SW¼NE¼,NE¼SW¼ N½SE¼	H.E.		Patent	5/05/1933	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	114	5 8	SW¼, S½SE¼, NW¼SE¼ and NE¼, N½NW¼	SRHE	8/08/1933	Cancelled	1/26/1939	
30	114	3	NE¼SE¼	C.E.		Patent	8/08/1934	
30	114	8 17	SE¼SW¼,SW¼SE¼ and NE¼, E½NW¼ E½SW¼, SE¼	SRHE		Patent	12/17/1935	
30	114	20 21 28 29	S½SE¼ and S½S½ and N½ and N½NE¼	SRHE		Patent	5/22/1937	
30	114	29 32	S½NE¼, SE¼ and NE¼, N½SE¼	SRHE		Patent	8/20/1937	
30	114	28 32 33	SW¼ and E½SE¼ and N½, W½SW¼	SRHE		Patent	2/25/1938	
30	114	22 23 25 26	E½SE¼ and S½SW¼, SW¼SE¼ & S½SW¼, NWNW, N½SW¼, NW¼SE¼ and E½NE¼, NW¼NE¼ N½NW¼	SRHE		Patent	5/26/1938	
30	114	25 26 26	S½SW¼, NW¼SE¼ and SW¼NE¼ and S½NW¼, NW¼SW¼ N½SE¼	SRHE		Patent	5/26/1938	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	114	34	SW¼NE¼, S½NW¼ NW¼NW¼, SW¼ W½SE¼	SRHE		Patent	6/03/1938	
30	114	2 10 11 14 15	S½SW¼ and S½NE¼, N½SE¼ SW¼SE¼ and N½NW¼, SW¼NW¼ S½SW¼, NW¼SW¼ and NE¼NW¼ and W½NE¼	SRHE		Patent	8/24/1938	
30	114	3 4 10	SW¼, S½SE¼ NW¼SE¼ and SE¼ and N½NE¼, N½NW¼ SE¼NW¼	SRHE		Patent	8/24/1938	
30	114	1	S½NE¼, SE¼NW¼ NE¼SW¼, SE¼SW¼ N½SE¼	SRHE		Patent	11/01/1938	
30	114	2 3 4	SW¼NE¼, S½NW¼ N½SW¼, NW¼SE¼ and Lots 1,2,3,4 and Lots 1,2,3	SRHE		Patent	3/02/1939	
30	114	3 4 5	S½N½ and S½N½, N½SW¼ and SE¼NE¼, NE¼SE¼	SRHE		Patent	4/01/1939	
30	114	28	SE¼	SRHE		Patent	6/05/1939	
30	114	20 29 32	S½SW¼ and W½ and NW¼, N½SW¼	SRHE		Patent	7/17/1939	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
30	114	6	S½NE¼, SE¼NW¼ NE¼SW¼, SE¼SW¼ SE¼	SRHE		Patent	7/24/1939	
30	114	5	SW¼NE¼, S½NW¼	SRHE		Patent	11/22/1940	
30	114	1 2 11 12	SW¼NW¼, W½SW¼ and SE¼NE¼, E½SE¼ SW¼SE¼ and N½NE¼ and NW¼NW¼	SRHE		Patent	3/17/1941	
27	115	34 35	NESE, Lot 4 and Lot 1, NWSW	Timber Sale Application	11/16/1945	License issued Cancelled	10/01/1946 1/09/1951	
27	115	12	SWNE, NWSE	SRHE	7/19/1933	Cancelled	12/06/1938	
28	115							Portions of twp included in Yellowstone Forest Reserve 1/29/1903.
28	115							Designated Yellowstone N.F. 1/29/1903
28	115							Name changed by E.O. to Wyoming N.E. 7/1/1908
28	115							Name changed to Bridger N.E. 3/10/1941
29	115	8 17	SESW, SWSE, NWNE and NENW	Coal Prospecting Permit	12/23/1936	Permitted Suspended and Expired	6/28/1937	

CATALOG OF LAND ENTRIES AND RELATED ACTIONS

TWP	RG	SEC	SUBDIVISION	ENTRY TYPE	DATE	DISPOSITION	DATE	COMMENTS
29	115							Portions of twp in Teton Forest Reserve 6/07/1902.
29	115	17	NWNE,E½NW,NESW	Coal Prospecting Permit	10/23/1943	Permit Issued	4/24/1944	
29	115	20	S½NE¼, N½SE			Withdrawn Revoked	11/21/1900 11/01/1924	For Ranger Station #2.
29	115							Entire twp in NF - Phosphate
30	115							Portions in Teton Forest Reserve 6/07/1902.
30	115							Entire twp in NF - Phosphate.
28	116							Entire twp in NF - Phosphate.

APPENDIX C

LANDER CUTOFF ASSESSMENT MAP SET

The following descriptions and evaluations correspond to trail segments illustrated on sheets 1 through 9, which are taken from portions of USGS quad maps. The sequence of maps runs from east to west.

Area 1: This segment was not examined, but segments to the west have been heavily impacted by large vehicle travel in recent years. Ruts were not observed at the crossing of the trail route and the gas well access road in the NW/SW of Section 35, nor on the rise of the hill to the northeast of that intersection. Heavy sagebrush growth may have obscured view of the ruts, however.

Area 2: This segment was alternatively driven and pedestrian surveyed. The trail has been used throughout this segment as an access route for heavy machinery and has been widened and leveled with a bulldozer. This segment retains very little integrity.

Area 3: The trail apparently lies entirely beneath the present graded road in this segment, except for a small area. The trail here has apparently been obliterated by road construction. A group of log buildings stands adjacent to and north of the trail route, however, and may be the remains of one of the early ranches of the area. The site of those structures should be considered a sensitive area, and the buildings should be recorded and evaluated. Much of the land adjacent to the present road has been leveled, planted in hay and irrigated, probably destroying any ruts that once were there.

Area 4: Although portions of this segment of the trail may be located to the north of areas pedestrian surveyed, no distinct ruts or other trail features were observed. The eastern one-third of this area may have been disturbed to facilitate irrigation in the past, and the western one-third was disturbed during construction of an irrigation ditch. The soil in this segment is loose and rocky, and the trail ruts may have been eroded away or obliterated by passage of cattle herds.

Area 5: Most of this segment is easily visible from the graded road, and no distinct trail ruts were observed here. Much of the eastern two-thirds of this segment is adjacent to the Max irrigation ditch, construction of which may have obliterated the trail ruts. Ruts may exist in one locality, where the trail turns to the southwest before crossing Fish Creek. Dense willow growth restricts visibility, and that portion of Area 5 was not pedestrian surveyed because it was fenced and posted against trespass. There is a relatively high probability for continued existence of wagon ruts in this area because of the heavier soil and the distance of the trail from modern disturbances.

Area 6: Throughout this area segments of the old trail are visible to the south of the graded road. The segments appear as a two-track trail at a lower elevation than the modern road, and in several areas trail segments are evident as grades on hills or cuts through or around ridges. In most instances the ruts are incised from one to three inches below the general ground surface. The continued use of the trail segments for ranch access to pastures along South Piney Creek is evident, but the ruts in this area have apparently retained much of their integrity. However, it is often difficult to distinguish the original wagon ruts from more modern vehicle tracks. Artifacts or other features associated with the trail were not observed in Area 6, but dense willow growth and other ground cover could have hidden those items and other ruts from view. Because of the existence and condition of the ruts, this entire area should be considered sensitive.

Area 7: This segment is entirely on the south side of South Piney Creek and was not pedestrian surveyed because it is fenced and posted. Distinct trail ruts probably exist in this area; ruts are distinct on both ends of the segment, and road construction has apparently not affected this portion of the trail. The trail route through Area 7 is visible from the graded road as a dim clearing through brush and trees, and the ford of the creek is discernible at the west end of the segment.

Area 8: The condition of the trail segments is similar here to that in Area 6, except that the distinct rut segments are shorter due to more pervasive impact from road construction. Original or early improvement of the old trail is evident at a point near the west end of the segment, where the route climbs a grade and cuts around a ridge which the modern road passes over. The ruins of a log structure are still present.

Area 9: This segment is very closely aligned with the modern road and consequently the trail has been obliterated in all but a very few places. The constriction of the canyon at this segment also precludes the possible existence of alternate lateral segments. The ruts which continue to exist are very distinct, however, and there are at least three sites of emigrant graves along the segment. The potential for interpretive development of this area has been partially effected by the USFS by means of erection of several large signs and fences around the graves. This area should be considered extremely sensitive.

Area 10: Near the confluence of South Piney Creek and Porcupine Creek, in the NW/NW/SW of Section 15, T29N, R115W, the trail apparently splintered into at least three roughly parallel alternates. The main trail parallels the modern road and is visible in several locations on the ridge to the east and northeast of the Snider Basin Guard Station. The ground surface has been significantly disturbed in the immediate vicinity of the Guard Station and no ruts were observed there. Also, the presently-used road coincides with the trail segment through the Guard Station. The two observed alternative segments are in the South Piney Creek meadow below or to the north of the Guard Station. The meadow was pedestrian surveyed because it appeared to be a particularly attractive camping and grazing area. One set of observed ruts runs roughly through the center of the meadow; these ruts are quite distinct despite luxuriant grass growth. The second segment is along the northern edge of the meadow, where the ground is drier and firmer. The second segment has been used for modern vehicle travel, but in some areas ruts are nearly identical to the ruts through the center of the meadow.

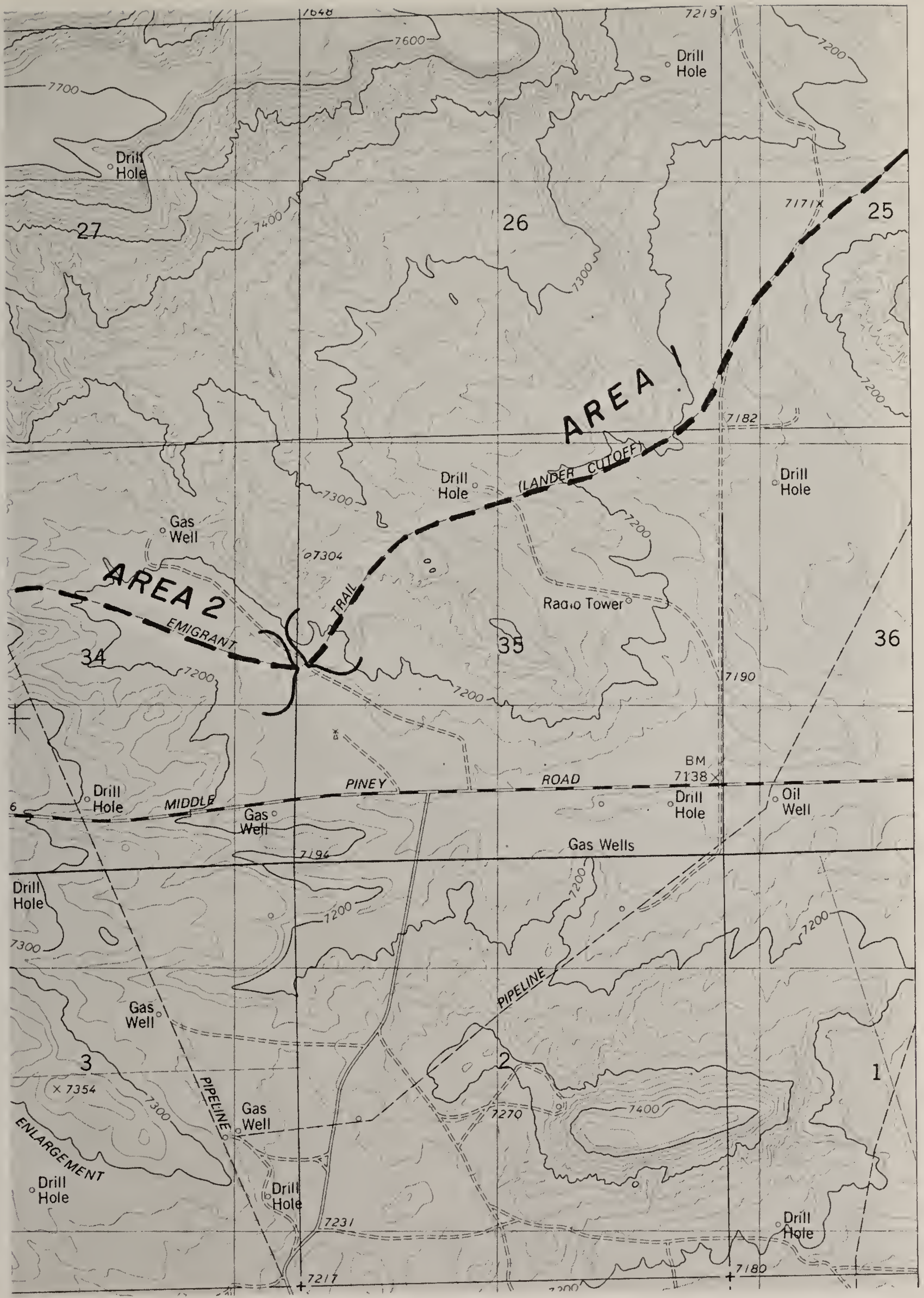
These two parallel segments appear to converge in the NW/SE/SW of Section 16, T29N, R115W, from whence they continue westward on a two-track trail. The tracks were not investigated westward from the convergence, but it is possible that the alternate tracks turned south in Section 17 to join the main trail somewhere in Section 20. It is also possible that the present two-track trail leading west from the Guard Station, on the south side of South Piney Creek, was originally a portion of the wagon trail. All of this area should be considered sensitive to disturbance and the trail ruts should be completely mapped and recorded in their full length.

Area 11: This segment of the trail corresponds almost entirely with the modern two-track trail. The trail has not been improved in most areas, and therefore the old trail can be considered to have good integrity for the length of this segment. Also, the surrounding landscape has not been developed or altered with so much as a fence, and so the integrity of setting is very good. The trail is marked at several locations along this segment with concrete pillars.

The original trail ruts are distinct from the modern trail in several locations that are numbered on the sheet for Area 11 (Appendix C). At locality A the modern trail swings southward around a knoll, while an old trail segment continues straight and crosses the knoll. An alternative trail segment apparently also went around the knoll, and the intersection of the two old trail segments is very distinct. At locality B the trail crosses Spring Creek and at least three more or less distinct sets of ruts are visible climbing the hill on the west side. Also present are the remains of a wooden bridge which apparently served the old trail and which is not used on the modern two-track trail. At locality C indistinct wagon ruts run parallel to the modern two-track trail.

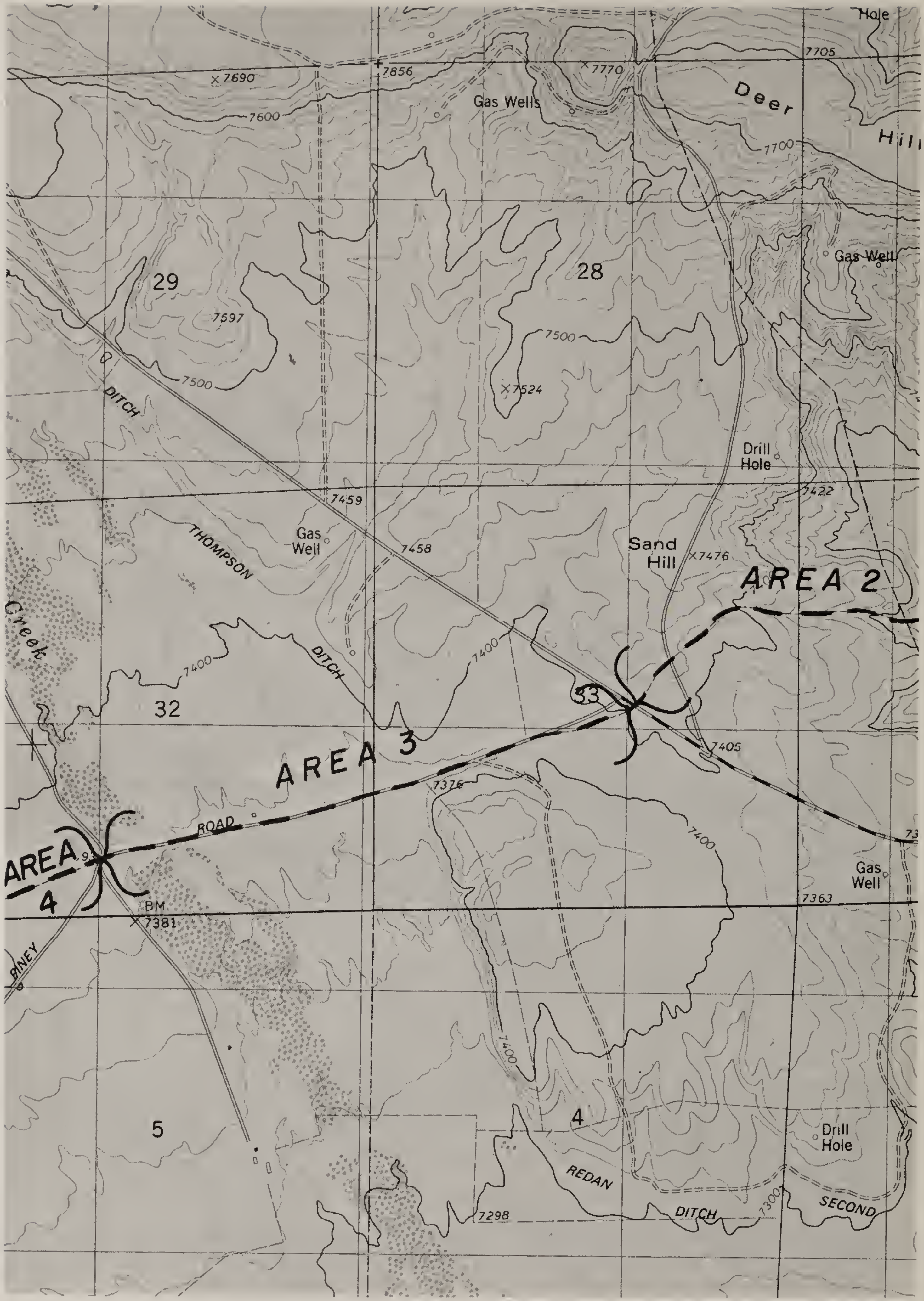
At locality D the trail may splinter or be joined by trails from the north and the northwest. An off-shoot trail appears to cross the branch of Spring Creek and then follow up the open meadow to the west. Remains of a ford and bridge or bridges are evident on this site. A second trail leads up the open meadow to the north;

this route could be the connection with the alternate tracks in the South Big Piney meadow. At locality E the old trail leaves the modern one and climbs directly over a ridge on Thompson Pass. The trail is very distinct and pristine at this location and is marked with a concrete pillar.



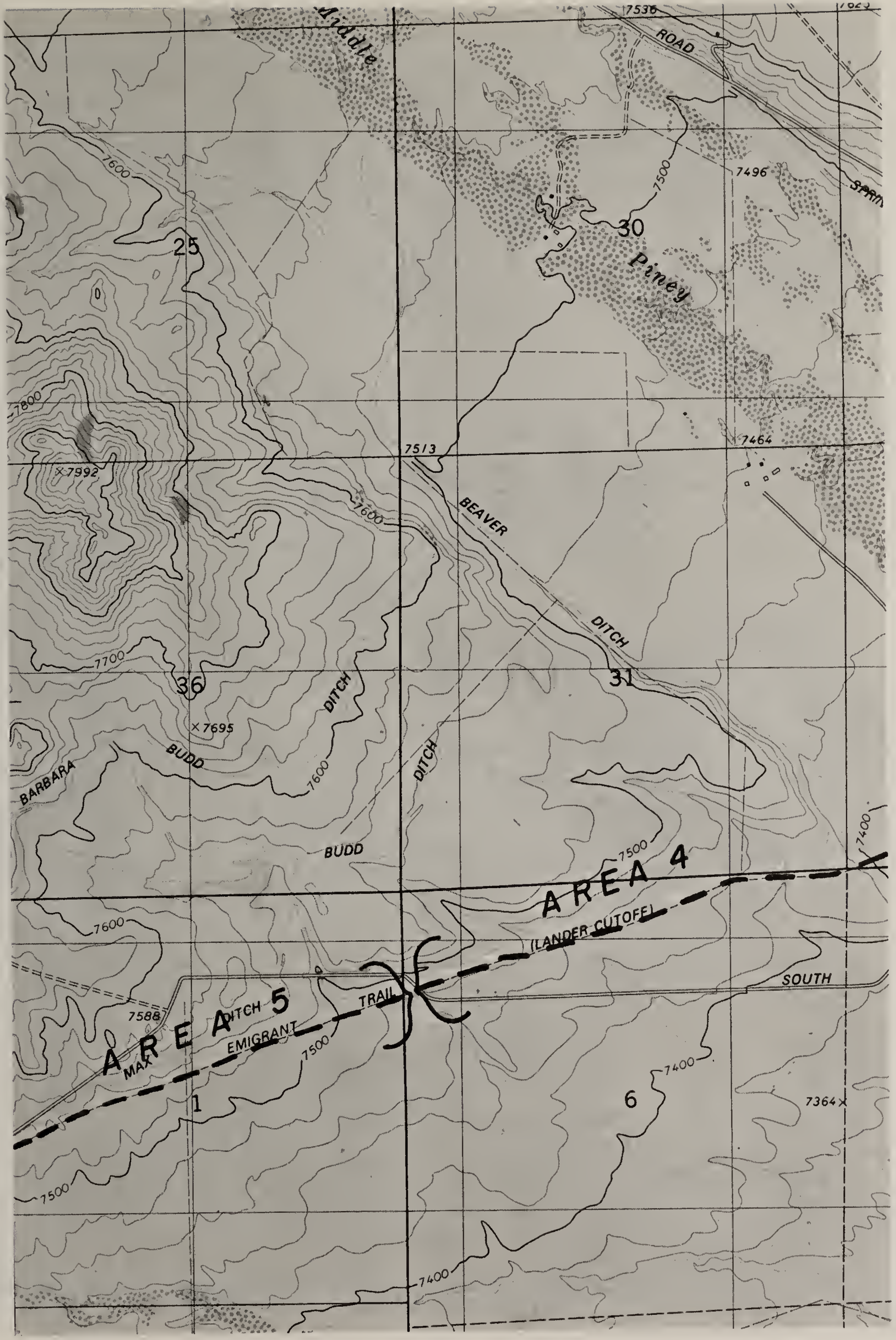
LANDER TRAIL ASSESSMENT, SHEET 1

Deer Hill, Wyo. U.S.G.S. Quadrangle

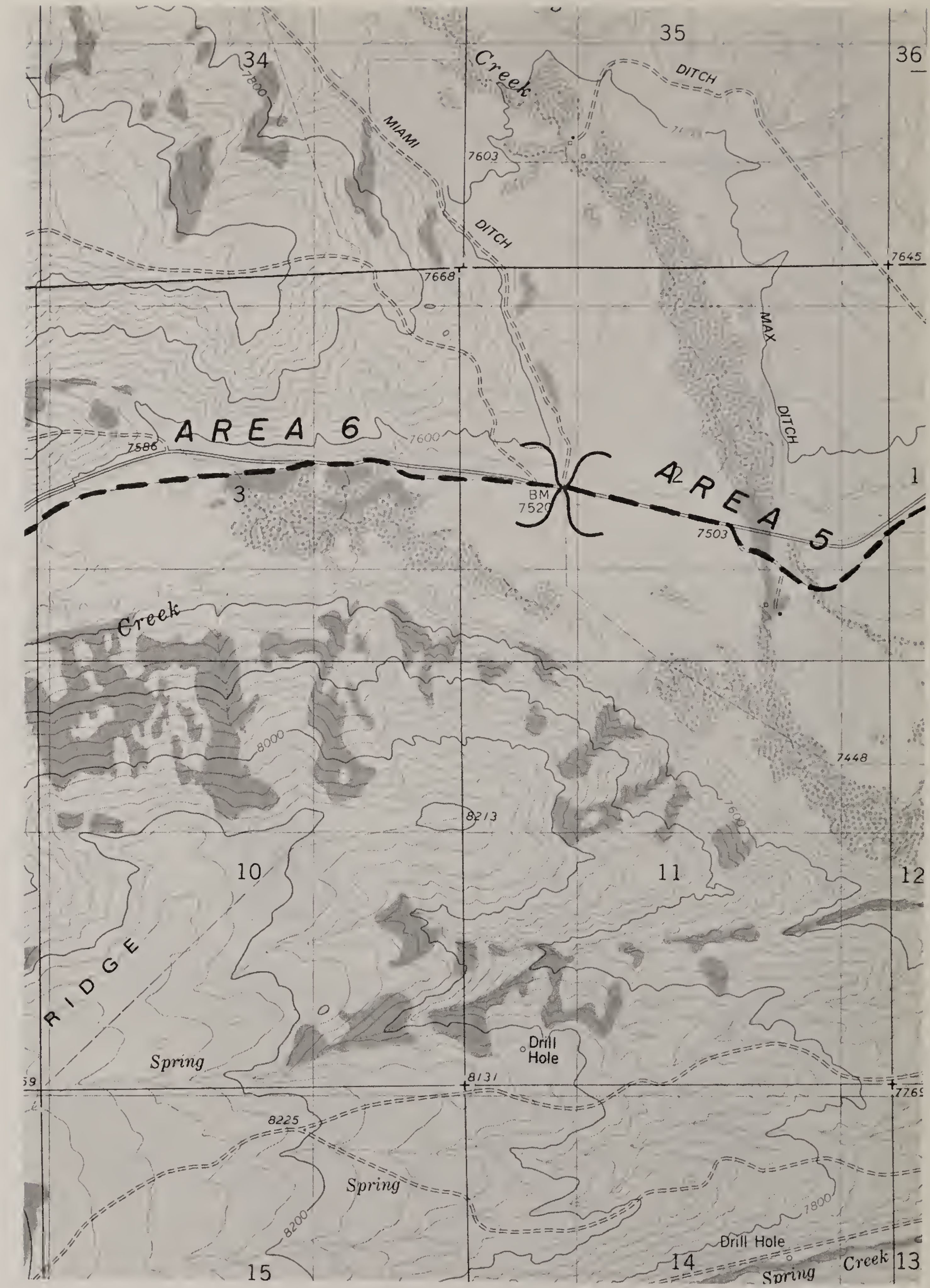


LANDER TRAIL ASSESSMENT, SHEET 2

Deer Hill, Wyo. U.S.G.S. Quadrangle

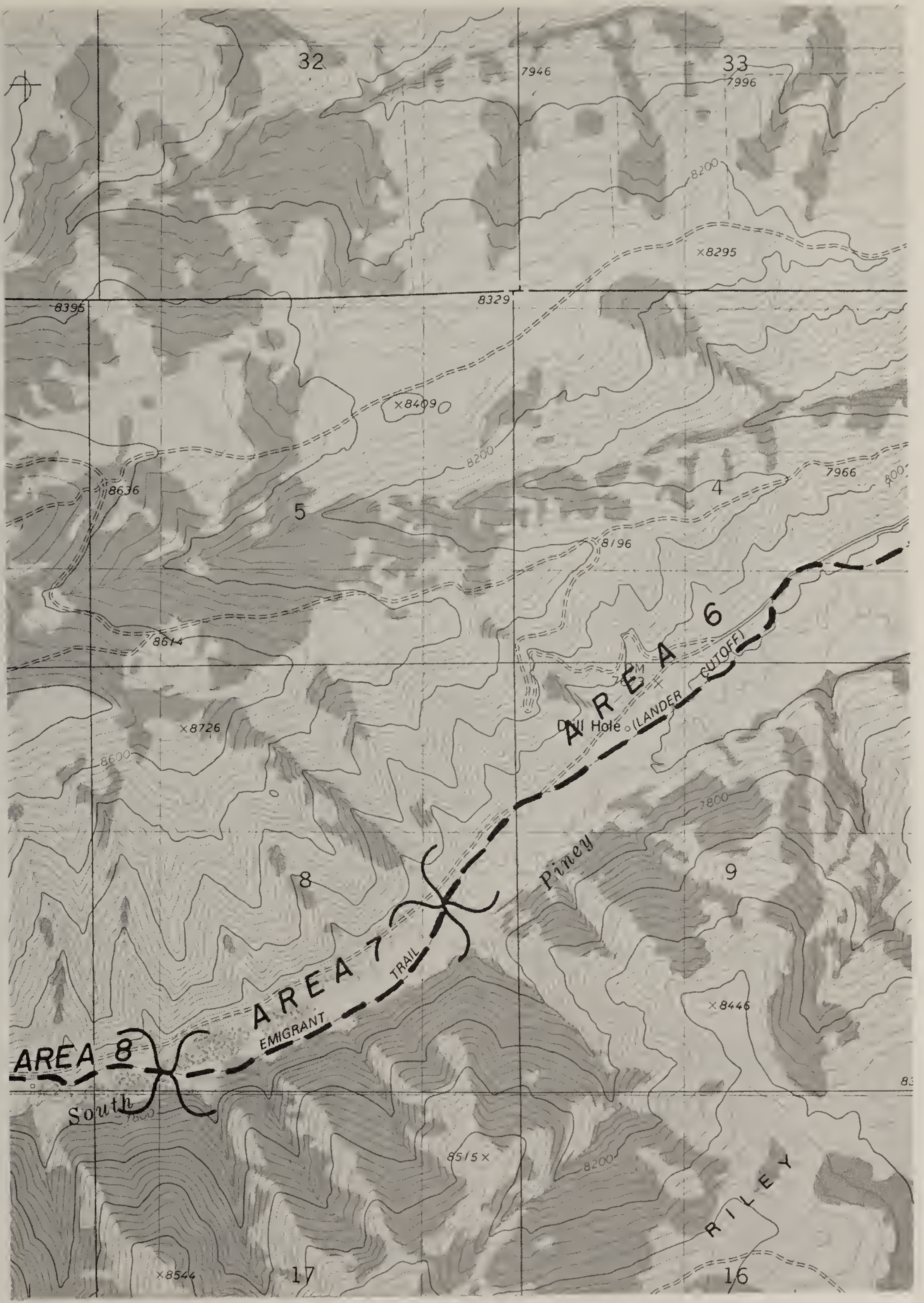


LANDER TRAIL ASSESSMENT, SHEET 3
Deer Hill, Wyo. U.S.G.S. Quadrangle



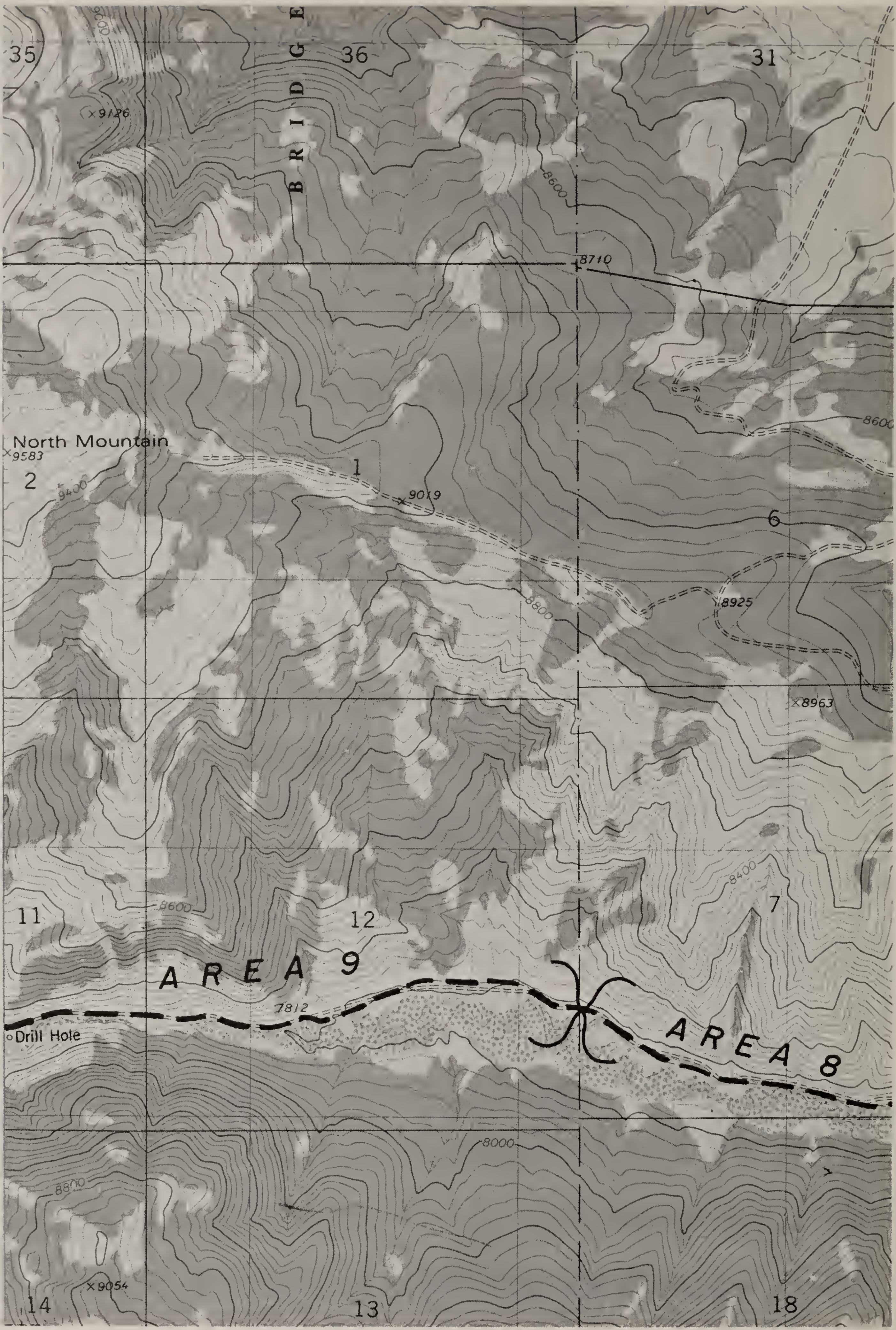
LANDER TRAIL ASSESSMENT, SHEET 4

Springman Creek, Wyo. U.S.G.S. Quadrangle



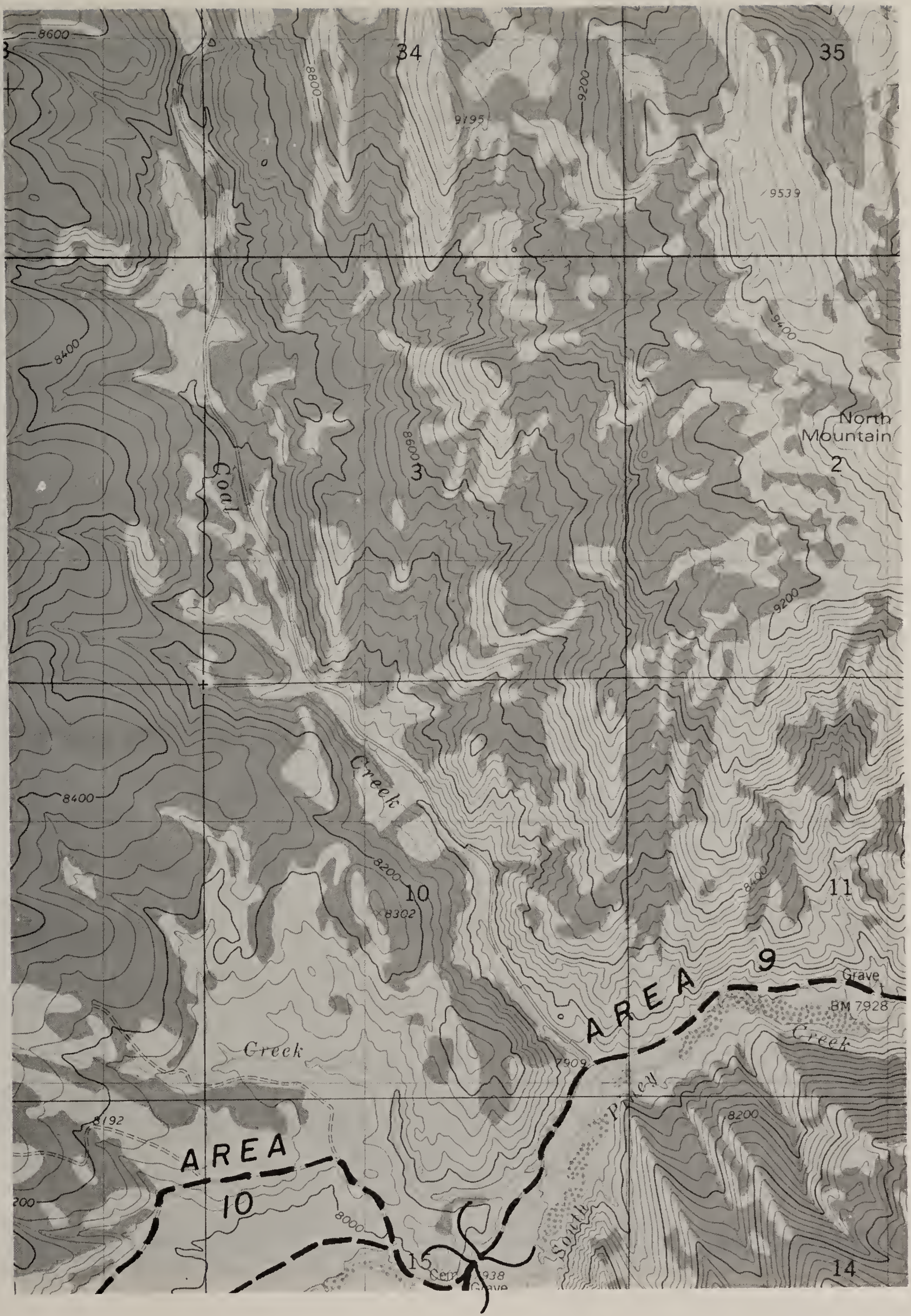
LANDER TRAIL ASSESSMENT, SHEET 5

Springman Creek, Wyo. U.S.G.S. Quadrangle

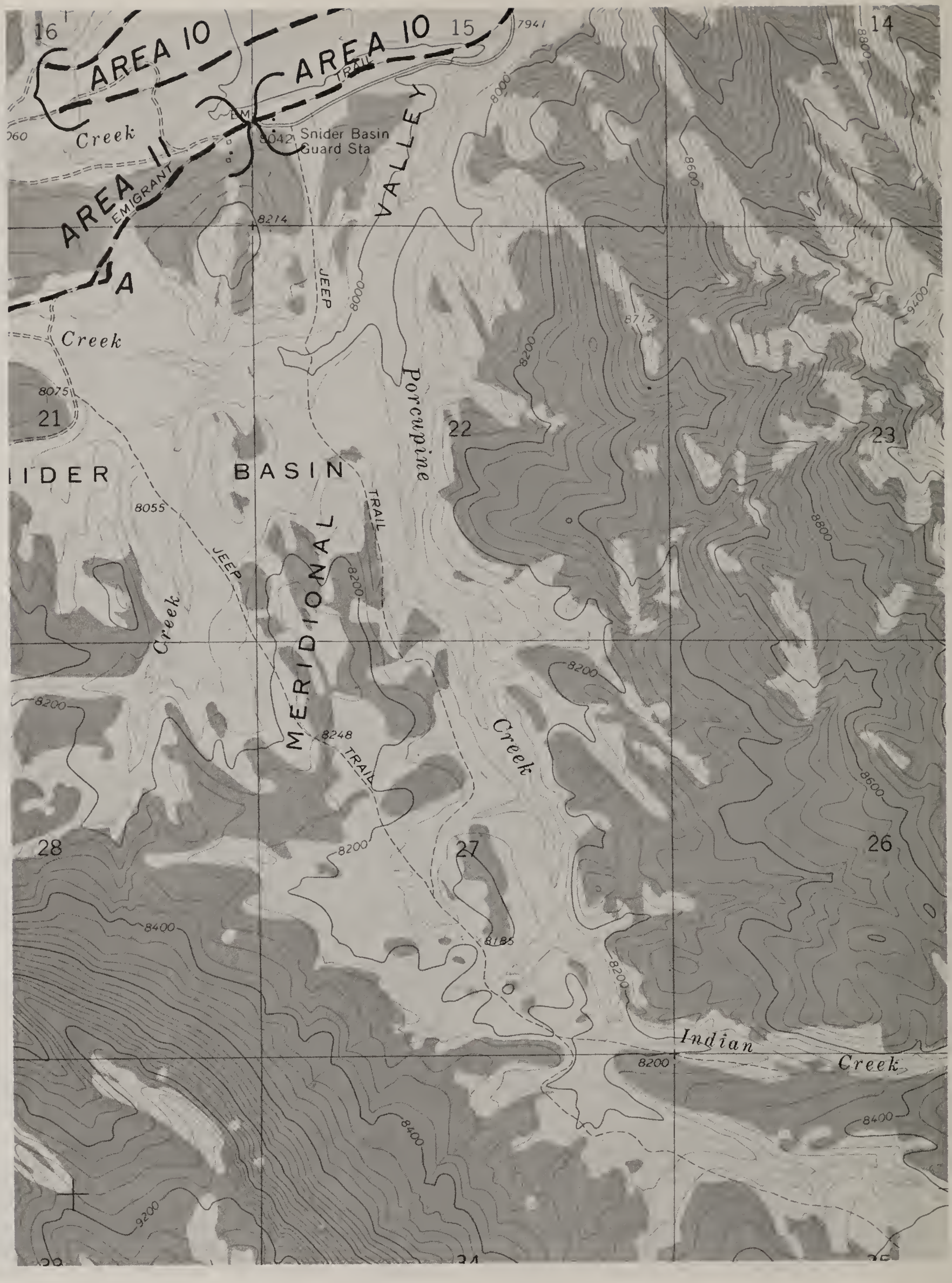


LANDER TRAIL ASSESSMENT, SHEET 6

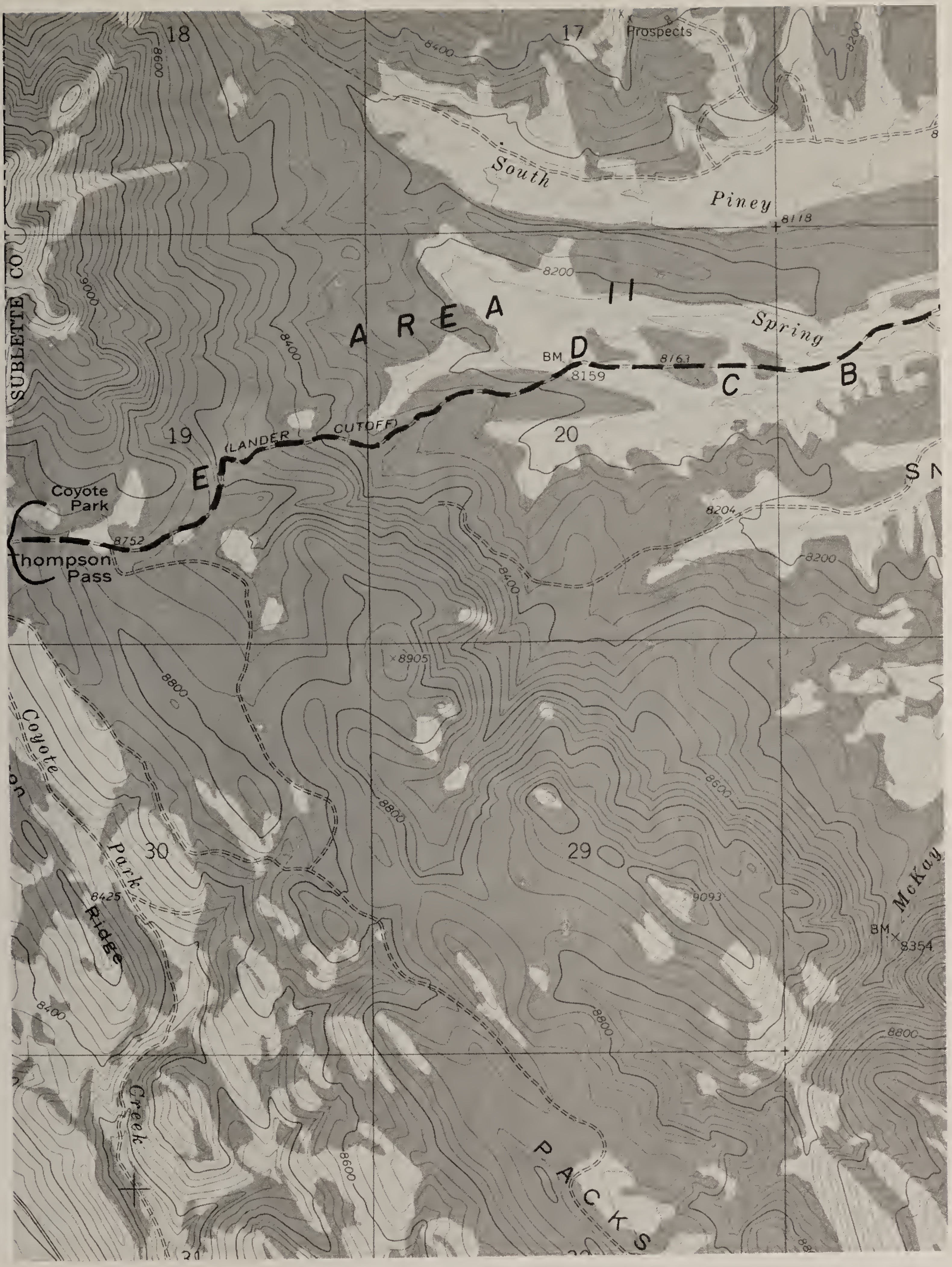
Springman Creek, Wyo. U.S.G.S. Quadrangle



LANDER TRAIL ASSESSMENT, SHEET 7
Wyoming Peak, Wyo. U.S.G.S. Quadrangle



LANDER TRAIL ASSESSMENT, SHEET 8
Mount Thompson, Wyo. U.S.G.S. Quadrangle



LANDER TRAIL ASSESSMENT, SHEET 9

Mount Thompson, Wyo. U.S.G.S. Quadrangle

APPENDIX D

DATA TABLES

Tables 1-I and 1-II summarize previous cultural resource investigations affecting proposed or alternative Riley Ridge actions. Table 1-I lists all projects on record that involved surface inspection. The great majority of this work has been conducted by professional archaeologists. Included are project name, legal description, USGS quadrangle map reference, year the work was accomplished, and the institution, firm, or person responsible. Because information about some projects (a small minority) exists only in the form of BLM maps, tabularized data are not always complete. Projects are organized by township, and each project is assigned a unique number (far right column). The numbers are keyed to Tables 1-II and 1-III, and to a set of Riley Ridge project maps that depict locations of all previous projects. Of particular interest in Table 1-I are "Results" (site numbers associated with individual projects) and "Methods". The latter column illustrates the overall inconsistency in field techniques and, in many instances, lack of information about the subject.

Table 1-II is organized by Riley Ridge action, with subdivisions according to specific facilities. Previous projects occurring within the impact zone of a particular facility are listed by number. Using this number, the reader may refer to Table 1-I for specific information.

Table 1-III is an inventory of all sites except historic trails/ routes, ordered sequentially by county (Lincoln, Sublette, and Sweetwater). For each site the table includes legal description, USGS map reference, feature and artifact content, age (prehistoric vs. historic; date or time period, if known), original recorder and date recorded, original recommendation, and National Register status. The far right column indicates the project with which each site is associated. Only the project number (keyed to Table 1-I) is given. In cases where a site was re-recorded, information from both contractors is given in Table 1-III. A group of 40 sites at the end of the table lacks Smithsonian numbers.

Table 1-IV provides summary data about all historic trails and routes that are potentially affected by the Riley Ridge Project.

Table 1-V presents known sites broken down according to Riley Ridge action (proposed or alternative) and, within each action, specific facilities. Only site numbers are given; specific site data may be obtained from Table 1-III.

A comprehensive listing of potentially significant sites, prehistoric and historic, and the related impact of Riley Ridge project facilities is presented in Table 2-I (no further consideration is given to sites known to be ineligible for the National Register.) Also enumerated are the recorder's recommendation for each site and a summary of the specific data available on National Register eligibility. Table 2-II provides a breakdown of the impact of Riley Ridge project facilities on historic trails.

TABLE 1-I

PREVIOUS CULTURAL RESOURCE INVESTIGATIONS WITHIN THE RILEY RIDGE EIS AREA

Project Name	Location TN	Location RW	Location Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Sec. 6 & Sec. 12 land sales	18 18	105 106	6 12	Kanda	1982	BLM	48SW4059, 4096, 4097, 4098, 4099, 4100, 4101, 4102	3 parcels totaling 100 acres walked in 100' transects	1
Sec. 6 & Sec. 12 land sales	18	105	12	Kanda	1982	BLM	No cultural resources within EIS area	Additional parcel (see project #249) totaling 160 acres. Undisturbed areas walked in 100' transects	2
Rock Springs & Kemmerer Expansion Areas Survey	18 18 18 21	105 106 105 116	6, 18 24 4, 8, 16, 20 34	Kanda, Pilot Butte Kemmerer	1979	WWC	48SW1525, 1526, 1528, 1529, 1530, 1531, 1532 1533, 1548, 1550, LN414; 7 IFs	Intensive survey of portions of 32 sections totaling 13,860 acres, walked in 30m transects. All or portions of 8 sections occur within EIS area.	3

*AERC	Archaeological Environmental Research Corp.
AR	Archaeological Rescue
AS	Archeological Services
BLM	Bureau of Land Management
BYU	Brigham Young University
CA	Commonwealth Associates Inc.
GK	Gordon & Kranzush
HPC	High Plains Consultants
IAC	Idaho Archaeological Consultants
JA	John Albanese
LT	Larson-Tibesar Associates
LOPA	Laboratory of Public Archaeology
MZ	Metcalf-Zier Archaeologists, Inc.
OA	Overland Archeology, Inc.
PT	Patricia Treat
PMZ	Pioneer-Metcalf-Zier
PEC	Powers Elevation
SA	Science Applications, Inc.
USFS	US Forest Service
UU	University of Utah
UW	University of Wyoming
WCRM	Western Cultural Resource Management
WWC	Western Wyoming College
WWS	World-Wide Survey Ltd.

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
CIG Desert Springs West Loop (5B) Pipeline	18	105	17, 18, 19	Kanda	1981	WWC	No cultural resources within EIS area	220' ROW	4
	18	106	24						
Mountain Fuel Supply Kanda-Clay Basin Pipeline	18	105	30, 31	Kanda	1981	WWC	48SW3394	No report available; information from site forms	5
	18	106	24, 25						
Husky Oil Sewage Lagoon Site	18	106	12	Kanda	1980	BLM	No cultural resources	5 acres surveyed	6
Texasgulf, Inc. core holes	18	111	2, 3, 4	Granger	1981	WWC	48SW3618, 4 IF's within EIS area (a) flake, (b) biface fragment, (c) debitage, (d) point, Elko series	200' diameter and 100' ROW of 15 core holes.	7
MAPCO Pipeline ROW	18	111	9, 10, 11	Granger	1980	LOPA, PMZ	48LN528, LN627, LN628, LN629, LN660, 48SW2314, SW2315, SW2316, SW2327, SW2328, SW2662, within EIS area	1,172 mi pipeliine; only very small portion occurs within EIS area. 100' ROW initially surveyed and 50' ROW surveyed in areas reinventoried.	8
Pacific Power & Light Intermountain Consumer Power Assn. Blacksfork transmission line	18	111	6	Granger, Sevenmile Gulch	1979	WWC	48SW1676	100' ROW of 12 mi line	9
	19	111	2, 3, 9, 10, 16, 17, 20, 30, 31,						
	20	111	25, 26, 35, 36						
Sweetwater County Trap Range	19	105	32	Kanda	1977	BLM	No cultural resources	100' ROW	10
Mtn. Bell buried cable route	19	105	32	Kanda	1981	AS	IF (flake)	50' ROW	11
Amoco Champlin #585 well and access	19	105	29	Kanda	1978	BLM	BLM-1, BLM-2 (no Smithsonian numbers assigned)	No information given in report	12

TABLE 1-I (Continued)

	Location								Proj.
Project Name	TN	RW	Sec.	USGS Quad	Year	By Whom*	Results	Methods	No.
Wyoming Highway Department TUP	19	105	32	Kanda	1977	BLM	No cultural resources	No information given in report	13
Amoco access road to WI Unit #1	19	105	28, 29	Kanda	1978	BLM	No cultural resources	Intensive survey of ROW	14
Natural Gas Co. South Dines Pipeline	19 19	105 106	30, 31,32 25, 27, 28 34, 35, 36	Kanda, Green River	1980	PEC	No cultural resources	50' ROW	15
Amoco Champlin 355 C #1 access	19	111	17, 18, 19	Granger, Seven-mile Gulch	1981	SA	48SW3808	200' ROW	16
ICPA Blacksfork-Granger transmission line reroute	19	111	19, 20, 30	Granger	1981	AS	48SW3243, 3244, 3245, 3246, 3247, 3248, 3249, 3250	100' ROW along 1.5 mi reroute	17
Follow-up testing on ICPA Blacksfork-Granger powerline	19	111	19, 20	Granger	1981	BLM, AR	Cultural clearance of two sites	Testing of 48SW3246 and 48SW3248	18
NWP Amoco Champlin 285K-1 well line	19	111	19	Granger	1982	AR	48SW3357	100' ROW	19
NWP well line ROW to Christmann-Hays Federal 1-20	19	111	20	Granger	1981	AR	No new cultural resources	100' ROW. Project location not shown in report, not mapped on topo.	20
Christmann 1-20 Hay Federal well & access	19	111	20	Granger	1981	JA	No cultural resources	40 acre well, 50' ROW	21
Granger Landfill Bore	19	111	28	Granger	1980	BLM	48SW2491, 2492, IF (scraper)	15m transects of 10 acre area	22
Granger Sewage Treatment Plant	19	111	27	Granger	1979	WWC	No cultural resources within EIS area	80 acre area, 40m transects, sewer line 10m transects	23
NWP well line to Amoco Champlin #355	19	111	18	Granger	1982	AR	No new cultural resources within EIS area	100' ROW	24

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
NWP Reading & Bates ROW	19 19	111 112	18 13	Moxa, Sevenmile Gulch	1981	AR	No cultural resources within EIS area	100' ROW	25
Amoco Champlin 285I #1 well & access	19 19	111 112	7 13	Moxa, Sevenmile Gulch	1979	AS	No cultural resources within EIS area	100' ROW, 40 acre well	26
NWP Champlin 285J-1 & 285I-1 tie-in	19 19	111 112	7 12, 13, 14	Moxa, Sevenmile Gulch	1980	WCRM	No cultural resources	200' ROW	27
NWP Lateral R/W (Moxa Arch System)	19 19	111 112	18, 19, 20 13	Granger, Moxa, Sevenmile Gulch	1981	AR	48SW3353, 3354, 3355, 3356, 3357, 3359	100' ROW	28
Frontier pipeline survey	19 21 21	111 106 107	33, 34 10, 11, 12, 16, 20, 30 36	Granger, Clay Buttes SW	1982	CA	48SW5045 within EIS area	100' ROW. Sections under location (this table) are those within or adjacent to EIS area only	29
NWP Amoco-Champlin #285 J-1 R/W and reroute	19	112	11, 12, 13	Moxa	1980	AS	48SW2065, 2066, 2067, 2075; IF (historic stoneware jar)	100 ROW	30
Amoco Champlin 149 "J" well #1	19	112	11	Moxa	1978	AS	48SW1441 (Locality 1)	200' radius well & 30' ROW	31
Amoco 285 Champlin "B" #1 access	19	112	3	Moxa	1978	BLM	No cultural resources	No ROW width given in report	32
Marathon Oil Fabian 2-2 well and access	19	112	2, 11	Moxa	1978	AS	48SW1051 IF (flake)	40 acre well and 100' ROW	33
A.M. Tripp Ct. #1 well and access	19	112	14	Moxa	?	?	No cultural resources	No report. Copied from BLM map.	34
NWP CH 285C-1 Lateral line A-10	19 20	112 112	3, 10, 11 33	Moxa	1978	AS	48LN82	100' ROW	35
Kemmerer-Bon Rico 25 KV Line	19 20 21	116 116 116	6 6, 18, 30 22, 27, 34	Kemmerer, Elkol	1981	BYU	48LN821 within EIS area	50' ROW	36

TABLE 1-I (Continued)

	Location								
Project Name	TN	RW	Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Davis Oil well location	20	105	18	Pilot Butte	1978	WWC	48SW984	500 x 500m well and access	37
Davis Oil Tram road	20	105	8	Pilot Butte	1977	BLM	No cultural resources	No information given in report	38
Mtn. Bell cable (RW-698) ROW	20	105	18	Pilot Butte	1982	WWC	No cultural resources	100' ROW	39
Mtn. Bell Green River Project S-9 Dell, ROW 22808	20	109	6, 7, 17, 18, 20, 28	Blue Point, Stevens Flat, Lombard Buttes	1980	WWC	No cultural resources within EIS area	50' ROW	40
	20	110	1						
	21	109	6, 7, 18, 19, 20, 29, 32, 33						
	22	109	31						
	22	110	22, 23, 25, 26, 36						
Stauffer Chemical mineral exploration drilling platform and access	20	109	17, 19	Stevens Flat	1977	WWC	No cultural resources	100 x 200' platform area	41
Stauffer Chemical drilling platforms	20	109	9, 12, 17, 20	Stevens Flat	1976	WWC	No cultural resources	No dimensions in report	42
	21	109	31, 36						
Mtn. Fuel lateral to Fabian Ditch well #1-34	20	112	34, 35	Moxa	1979	WWC	No cultural resources	100' ROW	43
Amoco 7 Mile Gulch #12 pipeline ROW	20	112	9	Moxa	1979	AS	No cultural resources within EIS area	100' ROW	44
Marathon Fabian Ditch #134 well/access	20	112	34, 35	Moxa	1978	WWC	48LN133, 48SW1275	100' ROW	45
NWP Lateral A-13 Pipeline & reroute	20	112	5, 6, 8, 9, 16	Moxa	1979	AS	48LN200	100' ROW	46

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Whiskey Buttes Unit Well #26 pad & access	20	112	5	Moxa	1979	AS	No cultural resources	Monitor of initial construction of 200' radius pad and 50' ROW; 40 acre well resurveyed in spring	47
Six Stauffer Pipelines ROW	20 21	112 112	4, 5, 6, 7, 8 8, 9, 16, 17, 22 thru 29, 32, 33	Cow Hollow Creek, Fontenelle SE	1979	WWC	48LN127, 128 within EIS area	100' ROW	48
NWP ROW Amoco Whiskey Buttes #38	20 21	112 112	5 35	Moxa, Fontenelle SE	1979	AS	No cultural resources	100' ROW	49
NWP Amoco Whiskey Buttes #27 pipeline	20	112	6	Moxa	1979	AS	No cultural resources	100' ROW	50
NWP Amoco Whiskey Buttes #44 pipeline	20 21	112 112	6 34	Moxa, Fontenelle SE	1981	AR	No cultural resources	100' ROW	51
Amoco Whiskey Buttes #27 & 33 well pads	20 21	112 112	6 20	Moxa, Cow Hollow Creek	1979	WWC	IF (biface)	40 acre area	52
Marathon Oil Whiskey Buttes #43 well & access	20	112	8	Moxa	1979	AS	48LN286	40 acre well, 100' ROW	53
Marathon Oil Whiskey Buttes #43 well & access relocation	20	112	8	Moxa	1979	AS	48LN472	40 acre well, 100' ROW	54
NWP Whiskey Buttes #26 Tie-in and Lateral A-13	20	112	6, 7, 8, 16, 17	Moxa	1980	WCRM	IF (no description in report)	400' ROW for lateral	55
NWP Whiskey Buttes #43 Tie-in	20	112	8	Moxa	1980	WCRM	No cultural resources	400' ROW	56
NWP Amoco 7 Mile Gulch #9	20	112	16	Moxa	1979	AS	No cultural resources	100' ROW	57

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
NWP Amoco 7 Mile Gulch #8 pipeline	20	112	16, 21	Moxa	1979	AS	48LN188, 189, 190	100' ROW	58
NWP Amoco 7 Mile Gulch #8 reroute	20	112	16, 21	Moxa	1979	WWC	48LN477	No ROW width cited	59
Champlin 285 A-1 Pipeline	20	112	27	Moxa	1978	WWC	No cultural resources within EIS area	No ROW width given	60
Amoco 7 Mile Gulch Unit Well #9	20	112	19	Moxa	1979	AS	48LN182, 183, IF (flake)	40 acre well	61
Stauffer Chemical Overthrust Extension Pipeline	20 20	112 113	7 12	Moxa	1979	WWC	No cultural resources within EIS area	Small portion of 70 mile ROW in EIS area; 100' ROW width	62
Lincoln Service Clay Basin Tap power line	20 21	115 114	2, 3, 11, 14, 23, 24, 25, 31 31	Willow Springs Little Round Mtn. Roberson Creek	1978	WWC	No cultural resources	50' ROW	63
Mtn. Bell buried telephone cable	20 21	115 115	5 32	Willow Springs, Little Round Mtn.	1980	WWC	No cultural resources	100' ROW	64
Mtn. Bell Cable line #20715	20	116	6	Elkol	1979	WWC	48LN134	Only portion of 23,700' cable ROW is in EIS area - 50' ROW	65
Elkol locality pipeline corridor	20 20 21	116 117 116	6, 7, 18, 19, 30 1, 12 34	Kemmerer, Elkol	1981	AERC	48LN825, LN826 within EIS area	100' ROW	66
Unnamed proposed highway	20 21	116 116	6, 7 26, 34	Elkol Kemmerer	1982	UW	48LN735, LN736, LN737, LN738, LN739	?	67
Utah Power & Light transmission line	20	117	2, 11, 14	Elkol	1979	AS	No cultural resources within EIS area	100' ROW (only small portion of line occurs in EIS area)	68

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Kemmerer Coal Co. survey, Phase II	20 21	117 116	9, 10, 11, 14, 15, 16, 22 9, 16, 17, 18, 19, 20, 21, 28, 29	Elkol, Kemmerer	1975	WWS	48LN21 within EIS area	Intensive pedestrian survey of 6.75 sq. miles	69
Kemmerer Coal Elkol-Sorenson Mine Expansion Plan	20 21 21	117 116 117	3, 4, 9, 10 7, 8, 16, 17, 18, 19, 30, 31 24, 25	Kemmerer	1979	WWC	No new cultural resources within EIS area	3000 acre survey, only portion of which occurs in EIS area; 100' transects	70
Kemmerer Coal Elkol-Sorenson South Block Mine	20 21	117 116	2 28, 29	Elkol Kemmerer	1981	LT	48LN794 within EIS area	1420 acre intensive survey, only areas within EIS area are listed	71
14 mi recreation area survey	21	105	32	Pilot Butte	1980	BLM	48SW2654, 2655, 2656, 2657	Intensive survey of approximately 60 acres	72
Amoco Champlin 584 B #1 access	21	106	27, 34	Clay Buttes SW	1982	CA	No cultural resources	200' ROW	73
Amoco Champlin 580 C #1 access	21 22	106 106	6, 7 32	Clay Buttes SW	1982	OA	48SW4152 IF (LA projectile point	4 acre well location and 200' ROW	74
Husky 11-24 Federal	21	107	24	Clay Buttes SW	1977	WWC	No cultural resources	No dimensions given	75
Stauffer Chemical drilling platforms and access	21	108	16	Big Island Bridge	1978	WWC	No cultural resources within EIS area	No dimensions given in report. Only 1 of 9 platforms occurs in EIS area.	76
Stauffer Chemical drillholes (SBI-61)	21	108	17	Big Island Bridge	1979	WWC	No cultural resources	200' radius	77
Stauffer Chemical SBI-68 drill holes and access	21	108	17	Big Island Bridge	1980	WWC	No cultural resources	200 x 200' drill location and 100' ROW	78

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Telephone line ROW in Lincoln & Sweetwater Counties	21	109	6	Lombard Buttes, Thoman School, McCullen Bluff	1980	UU	No cultural resources	100' ROW	79
	22	110	5, 6, 7, 8, 11, 14, 15, 16, 17, 22, 23, 25, 26, 36						
	22	111	1						
	23	111	19, 20, 26, 27, 28, 29 35, 36						
NWP Whiskey Butte 3 Trunk A Extension	21	111	5, 6, 7, 8, 17, 18, 19, 20, 29, 30	Fontenelle SE	1979	WWC	48SW1232, 1240, 1241, 1247, 1274 within EIS area	Unspecified ROW width along section lines	80
	22	111	19, 20, 29, 30, 31, 32						
Amoco Whiskey Buttes #34 pipeline	21	111	7, 8	Fontenelle SE	1979	AS	No cultural resources	100' ROW	81
Amoco Seven Mile Gulch #11	21	111	17, 18, 19	Fontenelle SE	1979	WWC	48SW1369, 1412, 1414	60' ROW snow monitored	82
NW Pipeline Whiskey Buttes Fed #1-6 pipeline ROW	21	111	6	Fontenelle SE	1980	AS	48LN515, 516, 517	100' ROW	83
	21	112	1						
NW Pipeline Whiskey Buttes Fed #1-6 pipeline ROW	21	111	6	Fontenelle SE	1980	WCRM	No new cultural resources	200' ROW; resurvey of area done by AS, no explanation given.	84
	21	112	1						
NW Pipeline #1-18	21	111	17, 18	Fontenelle SE	1981	AR	Re-evaluated 48SW1414	100' ROW	85
Anderson Fed #1-18	21	111	18	Fontenelle SE	1981	PEC	48LN681, 682, 683	40 acre well pad	86
NWP Amoco 7 Mile Gulch #10 pipeline	21	111	19	Fontenelle SE	1979	AS	No cultural resources	100' ROW	87

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
NWP Lateral A-5 Whiskey Butte 6, 8, 13	21	111	6	Fontenelle SE	1979	WWC	48LN97 within EIS area	Unspecified ROW width along section lines	88
	21	112	1, 2, 3						
NWP Moxa Arch Gathering System MFS Exchange #2	21	111	29, 30	Fontenelle SE	1981	AR	48LN817/SW3614, 48SW3615 IF (core) IF (flake)	100' ROW	89
	21	112	25						
Unidentified road survey	21	111	6, 7, 18, 19	Fontenelle SE	?	?	6 unnumbered sites (BLM), 48LN380, LN387?	No report. Route copied from BLM map.	90
	21	112	1						
	22	112	25, 26, 36						
NWP 7 mile gulch #10 well and access	21	111	19	Fontenelle SE	1978	AS	No cultural resources	No report. Copied from BLM map.	91
Reserve Oil Whiskey Buttes 1-6 well	21	111	6	Fontenelle SE	1979	?	48LN150? (no site form)	No report. Copied from BLM map.	92
Amoco Whiskey Butte Unit access roads	21	111	7, 6	Fontenelle SE, Fontenelle, Whiskey Buttes	1977	UW	48SW897, SW898, SW899, SW902, SW903, LN373, LN374, LN375, LN376, LN377, (11 other sites recorded by project appear to occur outside present project area)	Insufficient project data are available to plot the sites or project boundaries; survey results are outlined briefly and no information is available on ROW width. Conclusion that sites listed under "results" (this table) occur in present study area is based on a project map (1/2" = 1mi) and the legals on site forms.	93
	21	112	22, 21, 8, 11, 12						
	22	112	36, 25, 26						
	22	111	30, 29, 28, 33, 27, 34, 35, 26, 25 24, 23						
	22	110	19						
NWP Lateral A-9 Whiskey Butte 2, 4, 5, 19, 22	21	112	10, 14, 15 21, 22, 28, 29	Cow Hollow Creek, Fontenelle SE	1979	WWC	No cultural resources within EIS area	Unspecified ROW width along section lines	94
Amoco Whiskey Buttes #32 well & access	21	112	17, 20, 29	Cow Hollow Creek	1979	AS	No cultural resources within EIS area	40 acre well; no ROW width given	95

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj.
	TN	RW	Sec.						No.
Mtn. Fuel Lateral from Whiskey Buttes #22 to Whiskey Buttes #35	21	112	28, 29, 32	Cow Hollow Creek	1979	WWC	48LN144, 3 IFs (flake, flake, 2 retouched flakes)	100' ROW	96
NWP Lateral A-14	21	112	29, 32, 33	Cow Hollow Creek, Church Butte NW	1980	WCRM	48LN155, 201	200' ROW	97
NWP Whiskey Buttes #35 pipeline	21	112	32, 33	Cow Hollow Creek	1980	AS	No cultural resources	100' ROW	98
Marathon Oil well location	21	112	28	Cow Hollow Creek	1978	BLM		No report. Copied from BLM map.	99
NWP Amoco Whiskey Buttes #35 pipeline	21	112	32	Cow Hollow Creek	1979	AS	1 locality	100' ROW	100
Amoco Whiskey Buttes #44 well & access	21	112	33, 34	Fontenelle SE	1981	AERC	48LN727, IF (Late Archaic projectile point)	40 acre well, 100' ROW	101
Whiskey Buttes #33 well	21	112	20	Cow Hollow Creek	----	WWC	No cultural resources	No information given	102
Stauffer pipeline project	21	112	16, 17, 20, 29	Cow Hollow Creek	----	WWC	No cultural resources	No information given	103
Sand & gravel pit (operator not named)	21 21	113 114	19 22, 23, 24, 27	Opal	1976	BLM	No cultural resources	Pit area not given in report (approximately 50 acres); ROW width not given	104
Wy. State Highway Dept. Opal North Snowfence Survey	21 22 22 23	114 113 114 113	1, 2, 11 12, 14, 22 19, 30 35, 36 32	Opal, Graham Reservoir	1979-1981	UW	48LN231, 232, 233, 234, 235, 236, 241, 242, 323	100' ROW along each snowfence	105
Utah Power & Light Opal Compressor Station Tap Power Line	21 22	114 114	4, 9, 15 16, 22 22, 29, 32	Opal	1981	BYU	48LN743	150' ROW	106

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
NWP Cathodic Protection Sta. #1361	21	114	28	Opal	1981	AR	No cultural resources	4 acre survey area	107
NWP Opal Plant Turbo-Expander Addition	21	114	22	Opal	1982	HPC	48LN1048, 1049, 1050, 1051, IF (bottle base fragment, aqua)	30 acre survey area	108
Excavation of 48LN1048, LN1049, and LN1050	21	114	22	Opal	1982	HPC	No further work for any of the 3 sites.	Limited excavation of 3 sites yielded extensive artifacts, features & C-14 dates. See site table.	109
Pacific Power & Light power transmission line survey (Jim Bridger Archaeological Survey)	Specific field survey locations not available. Known portion of survey relevant to present project is in 21	114	2, 13	Opal	1973	UW	48LN335, 325	No maps are given in report; neither sites nor project boundaries can be exactly plotted, but general legal description of sites suggests they occur in present study area.	110
Willow Springs TUP access road	21	115	28, 32	Willow Springs	1977	BLM	No cultural resources	No ROW width given	111
Twin Creek mining area survey	21	116	7, 8, 9, 16, 17, 18	Kemmerer	1975	UW	48LN31	Intensive survey of 2400 acres	112
RME Oregon Short Line railroad spur	21	116	9	Kemmerer	no date	BLM	No cultural resources	Project not mapped. Entire section surveyed	113
Sweetwater, Kemmerer and Hanna-Atlantic Rim Coal ES sample survey	21	116	5, 8	Kemmerer	1976, 1977	WWC	48LN103 within EIS area	99,000 acre sample survey; two sections within EIS area intensively surveyed by 100'-150' transects	114
UP & L Fossil Butte 14 KV line	21 21 21	116 117 118	7, 8, 15, 16, 17 7, 8, 9, 10, 11, 12 11, 12	Kemmerer Sage	1982	BYU	No cultural resources within EIS area	100' ROW	115

TABLE 1-I (Continued)

	Location								Proj.
Project Name	TN	RW	Sec.	USGS Quad	Year	By Whom*	Results	Methods	No.
Kemmerer Coal Achaeological survey, Phase I	21 22	116 116	4, 5, 6, 9 20, 21, 28, 29, 32, 33	Kemmerer	1974	WWS	48LN332	Pedestrian survey at 50-75' intervals	116
Kemmerer Coal North Block mine survey	21 22	116 116	4, 5, 6, 7, 8, 9 20, 21, 27, 28, 29, 31 32, 33, 34	Kemmerer	1982 (field work: 1980-81)	LT	48LN549-561, LN566-582, LN584, LN768-771, LN774-783, LN786, LN787, LN794, LN879, LN883-889, LN892, LN894, LN899, LN902-906	Survey of 5505 acres yielded 110 sites, 27 of which were tested. Only portion of survey area pertinent to EIS. Survey largely re-survey of Worldwide Phase I	117
Energy Reserves Blue Rim 1-30 well & access	22 22	106 105	25, 26, 27 28, 29, 30 30	Clay Buttes SW, Clay Buttes SE	1982	MZ	No cultural resources within EIS area	40 acre well, 100' ROW	118
Forest Oil drill location and access	22	106	31	Clay Buttes SW	1977	WWC	No cultural resources	No dimensions given	119
Forest Oil well location & access	22 22	106 107	31 25, 36	Clay Buttes SW	1978	BLM	No cultural resources	No dimensions given	120
Forest Oil drill platform and access	22	106	31	Clay Buttes SW	1977	WWC	No cultural resources within EIS area	No dimensions given; access roads not mapped in report	121
Energy Reserves Blue Rim Federal 5-1 access	22	106	30, 31, 32	Clay Buttes SW	1982	MZ	48SW5071	100' ROW	122
Davis Oil Timmy A Fed. #1 well & access	22 22	107 106	25 30	Clay Buttes SW	1982	HPC	No cultural resources	40 acre well, 100' ROW	123
Seedskadee National Wildlife Refuge Fencing Project	22 22 23	109 110 110	6, 7, 8, 17, 18 1, 2 34, 35	Thoman School	1981	IAC	No cultural resources	10' ROW along 43 mi of proposed fence and 3 acre maintenance area	124
Wyoming Highway Dept. Dodge and refuge pits, plant site and haul road	22 23	110 112	36 24	Lombard Buttes, Fontenelle	1981	UW	No cultural resources within EIS area	10 acre refuge pit is only portion of survey within EIS area	125

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Proposed Farson-Fontenelle road	22 22	110 109	23, 24 8, 9, 17, 18, 19	Thoman School	1982	UW	48SW5092, 5093, 5094 within EIS area	?	126
NW Pipeline A-6 Lateral	22	111	18	Fontenelle	1980	WCRM	Re-evaluation of 48LN146	100' ROW	127
NW Pipeline Whiskey Butte #15 tie-in	22	111	23, 25, 26	Whiskey Buttes, McCullen	1980	WCRM	No cultural resources	200' ROW	128
Unidentified linear survey	22 22	111 112	28, 29, 30 25, 26, 36	Fontenelle SE	?	BLM?		No report. Copied from BLM map.	129
Mountain Fuel #35 mainline pipeline	22 23	111 111	5, 6, 7 32, 33	Fontenelle	1979	WWC	48LN146 within EIS area	100' ROW	130
Amoco Shute Creek Unit #7 well and access	22 23	112 112	6 31	Shute Creek Lake	1980	AS	48LN501-507; IF 1, 2, 3: flakes	40 acre well location and 100' ROW	131
Amoco Shute Creek Unit #9	22	112	11, 12	Fontenelle	1980	PEC	48LN619 thru LN621 within EIS area	40 acre well pad and 100' ROW of proposed access and reroute (recommended access)	132
NW Pipeline Shute Creek #7	22 23	112 112	6 31	Shute Creek Lake	1981	AS	No cultural resources	100' ROW	133
Amoco Shute Creek Unit #11	22	112	11	Fontenelle	1981	SA	48LN919	40 acre well pad and 200' ROW	134
NW Pipeline well line for Amoco Shute Creek #4	22	112	1	Fontenelle	1981	AR	No cultural resources within project area	100' ROW	135
Amoco Shute Creek #8 well and access	22 22	112 113	7 1, 12	Shute Creek Lake	1981	PEC	48LN674, 675, 676	40 acre well pad and 100' ROW	136
Marathon Oil Shute Creek Unit #5 well	22	112	4	Fontenelle	1979	AS	48LN140	40 acre well, 100' ROW	137

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mtn. Fuel Supply Pipeline ROW	22	112	14, 22, 23, 27	Fontenelle, Fontenelle SE	1977	BLM	No cultural resources within project area	No ROW width given in report	138
NW Pipeline Sunny Snowbank pipeline	22	113	2, 1	Shute Creek Lake	1979	AS	Site to be monitored was not relocated (48LN47)	Monitor line (50' ROW) in Sec. 2 for impact to 48LN47; site not within ROW	139
NWP Slate Creek Gathering Trunk A	22 22 23	113 116 114	6 1 26, 27, 28 29, 30, 35, 36	Graham Reservoir, Round Mtn.	1982	AR	48LN1097, 1098, 1099, 1100 within EIS area; 5 IFs (core, purple glass; flake; sandstone; core; flake)	100' ROW	140
Davis-Blackjack #1 & 3 Gathering System pipeline	22 23 23	113 112 113	1, 12 30, 31 36	Shute Creek Lake	1979	GK	48LN48, 203, 204, 1082, 1084; IF (flake)	50' ROW	141
NW Pipeline Craven Creek Air Quality Monitoring Site	22	113	27	Cow Hollow Creek	1981	AR	48LN824	10 acre area	142
Energetics No. 4 Fed 1 access road	22	113	26, 27, 28, 29, 30, 31	Cow Hollow Creek, Opal	1980	AS	IF (flake)	100' ROW	143
Davis Oil Oyster Gap Unit #1 well pad and access	22 23	115 115	1, 2, 12, 13 26, 27, 35	Round Mountain	1979	AS	No cultural resources within EIS area	40 acre well field and 100' ROW	144
10 acre gravel site for Lincoln County	22	116	22	Kemmerer	1981	BLM	1 site mentioned in report; no information available	10 acres and 50'-100' buffer; no map coverage provided in report	145
Huckabay, Ltd. 24-26 Paternal access	22	116	26, 27	Kemmerer	1982	PEC	No cultural resources within EIS area	100' ROW	146
Overthrust Belt Class II Inventory	22	116	14	Kemmerer	1981	WWC	48LN333 within EIS area	Only one transect occurs in EIS area. Total area surveyed was a 2% sample of BLM lands (21,418 acres)	147

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Big Sandy Water Project pipeline ROW	23 23	107 108	7, 18, 19, 30 25	Pittman Well	1982	UW	48SW4630 within EIS area	100' ROW. Only portion of a 6 mile line occurs within EIS area.	148
Unnamed pipeline R/W	23	111	19	Fontenelle	1973	WWC	48LN337	No report, information from site form	149
Lincoln Service Corp. Thoman Overhead Tap Power Line	23 23	111 112	18 13	Fontenelle	1980	WWC	No cultural resources	100' ROW	150
Davis Oil unnamed drill location and access	23	111	18	Fontenelle	1977	WWC	1 site (quarry), 1 IF (flake); no number or form for site	Well pad area and ROW width not given	151
Davis Oil Storm Shelter Unit #9 and access	23	111	17, 18, 19	Fontenelle	1977	BLM	No cultural resources	Well pad area and ROW width not given	152
Lincoln Service Mtn. Fuel Supply Tap Line Overhead transmission line	23	111	19, 20, 28, 29, 33	Fontenelle	1980	AS	No cultural resources within EIS area	100' ROW	153
Wyoming Highway Dept. Dodge Pit, Plant Site, and Haul Road	23	112	24	Fontenelle	1981	UW	48LN671, 672	10 acre pit and plant site areas; ca. 125' ROW	154
Stauffer Chemical Shute Creek Wells Pipeline Extension	23	112	30, 31, 32	Shute Creek Lake	1978	WWC	No cultural resources within EIS area	100' ROW	155
NW Pipeline CIG Shute Creek #1 Pipeline	23	112	32	Shute Creek Lake	1979	AS	No cultural resources	100' ROW	156
NW Pipeline Lateral A-1, Extension 1, Shute Creek Gathering System	23	112	32, 33, 34 35, 36	Fontenelle, Shute Creek Lake	1981	AR	48LN749, 750, 751, 752	100' ROW	157

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Untitled pipeline ROW	23	112	24	Fontenelle	1973	WWC	48LN336	No report. Site map illustrates pipeline ROW. No further information available.	158
Rainbow Resources Fed 1-10 well and access	23 23	113 114	8 10, 11, 12	Graham Reservoir	1979	PEC	No cultural resources within project area	40 acre well pad, 100' ROW	159
Energetics Butterfly Unit #3 access road	23	113	5, 8, 17, 20	Graham Reservoir, Fort Hill	1981	WWC	48LN684	100' ROW	160
Energetics 30-36 State access road	23 24	113 114	5 36	Fort Hill	1981	AR	48LN664, 665; 4 IF's (no information)	100' ROW	161
Energetics 20-2 well and access	23	114	2	Fort Hill	1980	WWC	48LN480	40 acre well pad, 60' ROW	162
Energetics 32-1 well and access	23	114	1	Fort Hill	1980	AS	48LN480, 490-492	100 acre well; ROW width not given in report	163
American Quasar #1 Williams Federal	23	114	31	Round Mountain	1975	JA	No cultural resources	300 yard radius	164
NWP Lincoln Road Gathering System Trunk A 1-25-5	24 24 24	111 112 113	17, 20, 29, 31 27, 28, 29, 30, 35, 36 22, 25, 26	Fontenelle Res. SW Fontenelle Res. SE	1977	UW	48LN360 within EIS area	No ROW width given in report	165
NW Pipeline Pomeroy Draw Unit 1-11 pipeline	24	113	10, 11	Fontenelle Reservoir SW	1980	AS	No cultural resources within project area	100' ROW	166
Energetics 30-36 State well	24	114	36	Fort Hill	1981	AR	48LN658	40 acre well pad and a small portion of access (not defined on map) which was later rerouted	167

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Lincoln Service Co. power line	24 25 25	114 113 114	2, 11, 12 14 26, 29, 30-34 24	Fort Hill	1978	WWC	IF (scraper)	No ROW information given in in report	168
Williams Exploration Federal 1-24 access	24 25	114 113	2, 11, 12 28, 29, 30 31, 32, 33, 34	Fort Hill	1981	SA	No cultural resources	200' ROW	169
Davis Oil DRJ Fed. well & access	25	109	19, 20, 30, 31	Monument Butte NE, Twelvemile Sink	1979	AS	No cultural resources	100' ROW	170
Energetics Fed. 31-3 well location	25 26	110 110	3 34	Monument Butte	1981	MZ	No cultural resources	40 acre well pad	171
Energetics Fed. 32-3	25	110	3	Monument Butte	1978	WWC	No cultural resources	40 acre well, 50' ROW	172
NWP Energetics Fed. 32-3	25	110	3	Monument Butte	1979	AS	No cultural resources	100' ROW	173
NWP well line to Energetics Fed. 32-35 (AR 82)	25 26	110 110	2, 3 35	Monument Butte	1982	AR	IF (flake)	100' ROW	174
Energetics Fed. 32-8 well & access	25 26	110 110	4, 5, 8 33	Monument Butte	1981	MZ	No cultural resources within EIS area	40 acre well, 30m ROW	175
NWP well line to Energetics Fed. 32-8	25 26	110 110	4, 5, 8 33	Monument Butte	1982	AR	No cultural resources within EIS area	100' ROW	176

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Natural Gas Corp. of California Fontenelle Field Evaluative Survey	25	111	5-8	Anderson Canyon	1982	AR	48SU472, 474	Use of existing data combined with transect sampling	177
	25	112	1-21	Names Hill					
			28-32	Fontenelle Res. SW					
	25	113	1-3, 10-12 13-15, 22-24, 25-27, 34-36	Fort Hill					
	26	111	19, 20, 29, 30, 31, 32						
	26	112	21-36						
	26	113	34, 35, 36						
Mtn. Bell buried telephone cable	25	112	7, 18	Names Hill	1978	WWC	48LN225	50' ROW	178
	25	113	13						
Pacific Transmission 24-18 well & access	25	112	17, 18	Names Hill	1978	BLM	48LN225	8 acre well pad, 100' ROW	179
Pacific Transmission transmission line	25	112	6, 7	Names Hill	1976	WWC	48LN354-357	40' ROW	180
	25	113	12, 13						
	26	112	29, 31, 32						
Pacific Transmission well (no name given)	25	113	11	Names Hill	1976	BLM	No cultural resources	Well pad dimensions not given in report	181
Lincoln Service Co. power line tap	25	113	13	Names Hill	1977	WWC	48LN36	25' ROW	182
Natural Gas Corp. of California PTS 32-12 well & access	25	113	12	Names Hill	1980	WWC	No cultural resources	40 acre well pad, 100' ROW	183
Pacific Transmission 23-13 well, access and alternate access	25	113	13	Names Hill	1978	WWC	48LN36	40 acre well pad, 80' ROW	184
Aspirin Unit #1 well pad & access	26	108	7	Monument Butte NE,	1980	AR	48SW2617	40 acre well (access width not given)	185
	26	109	12, 13	Twelvemile Knoll					

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Aspirin Unit #1 south access route	26	109	13, 23, 24, 26, 36	Monument Butte NE	1980	AR	48SW2636, 2637, 2638, 2639, 2640	100' ROW	186
Davis Oil drill hole and access	26	109	10, 11, 12	Monument Butte NE	1976	WWC	No cultural resources	No dimensions given	187
Davis Oil Parrish Mark Unit #1 well & access	26	109	12	Twelvemile Knoll, Monument Butte NE, Teakettle Butte	1978	AS	48SW1738	40 acre well, 100' ROW	188
	27	108	6, 7, 18 19, 30						
	27	109	1, 2, 3, 4, 5						
NWP Lateral B2, Extension #2	26	110	8, 16, 17, 21, 28, 33	Monument Butte, Oasis Well	1982	AR	48SW4379, 48SW4380; 3 IF's (single pieces of oxidized sandstone)	100' ROW	189
Energetics Folse Federal #30-1 well and access	26	110	6	Oasis Well	1982	MZ	IF (retouched flake)	40 acre well and 100' ROW	190
	26	111	1						
Energetics 30-16 State access	26	110	5, 6, 16, 17	Monument Butte	1981	MZ	48SW1841 (historic), 48SW3655	100' ROW (partially mapped on blueline; incomplete map coverage)	191
	27	110	31						
	27	111	25						
Energetics 30-16 State well	26	110	16	Monument Butte	1981	MZ	No cultural resources	40 acre well location	192
Energetics 30-16 State access road	26	110	5, 6, 8, 16, 17	Monument Butte, Oasis Well	1981	MZ	48SW3655	100' ROW	193
	27	110	30, 31						
	27	111	25						
Energetics Fed. 33-35 well & access	26	110	34, 35	Monument Butte	1981	MZ	No cultural resources	40 acre well, 30m ROW	194
Energetics Fed. 32-34 well & access	26	110	33, 34	Monument Butte	1981	MZ	48SW3806, 3807, IFs (solder top can, flake, flake)	40 acre well, 30m ROW	195

TABLE 1-I (Continued)

	Location								
Project Name	TN	RW	Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Energetics McDonald 32-34 access reroute	26	110	33, 34	Monument Butte	1981	MZ	48SW4210, IF (retouched flake)	30m ROW	196
Energetics 32-4 Emigrant well & access	26 27 27	110 110 111	4, 5, 6 30, 31 24, 25	Oasis Well	1981	PT	IF (biface)	40 acre well, unspecified ROW width	197
American Quasar Fontenelle Unit 2, #13-21 well & access	26	112	13	Anderson Canyon	1982	AR	No cultural resources	40 acre well, 100' ROW	198
NW Pipeline 82-6 pipeline	26	112	6	La Barge	1981	AR	48LN924	100' ROW	199
Belco Petroleum Green River Bend Unit 82-6 well	26	112	6	La Barge	1981	PEC	No cultural resources	40 acre well pad	200
NW Pipeline Belco 79-12 pipeline	26 26	112 113	6, 7 12	La Barge	1980	AS	No cultural resources	100' ROW	201
NW Pipeline Belco 80-7 pipeline	26	112	7	La Barge	1980	AS	No cultural resources	100' ROW	202
NWP Green River Bend Unit 79-12 well line	26 26	112 113	7 12	La Barge	1981	AR	48LN913, LN914, LN915	100' ROW	203
J. I. Christmann well, access & pipeline (no name or number)	26	113	3	The Hogsback	1975	BLM	No cultural resources	Well pad area not given in report (approx. 20 acres)	204
Belco Petroleum Green River Bend Unit 87-11 well	26	113	11	Names Hill	1981	PEC	IF (projectile point)	40 acre well pad	205
NW Pipeline Belco 87-11 pipeline	26	113	11	Names Hill	1982	AR	No cultural resources	100' ROW	206

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
NW Pipeline Cordillera Corp. Hyram Ditch 42-25 pipeline	26	113	25, 36	Names Hill	1982	AR	No cultural resources within project area	100' ROW	207
Untitled pipeline ROW	26	113	24	Names Hill	1973	WWC	48LN33	No report. Site map illustrates ROW.	208
Belco Petroleum Green River Bend Unit 65-14 well & relocation	26	113	14	Names Hill	1979	WWC	No cultural resources	55 acre well pad (including relocation)	209
NW Pipeline Belco 77-13 pipeline	26	113	13	Names Hill	1980	AS	No cultural resources	100' ROW	210
NW Pipeline Belco 78-13 pipeline	26	113	13	Names Hill	1980	AS	No cultural resources	100' ROW	211
NW Pipeline Belco 76-14 pipeline	26	113	14	Names Hill	1980	AS	No cultural resources	100' ROW	212
Belco Petroleum Green River Bend Unit 76-14 well & access	26	113	13, 14	Names Hill	1980	WWC	IF (graver)	40 acre well pad, 100' ROW	213
Mtn. Bell buried telephone line	26	113	14	Names Hill	1978	WWC	No cultural resources	50' ROW	214
NW Pipeline Belco 64-11 pipeline	26	113	2, 11	La Barge	1979	AS	No cultural resources	100' ROW	215
NW Pipeline Belco 65-14 pipeline	26	113	14	Names Hill	1979	AS	No cultural resources	100' ROW	216
Mtn. Bell buried telephone cable	26	113	7, 8	Fort Hill	1980	WWC	No cultural resources within EIS area	100' ROW	217
NW Pipeline ROW to Texaco La Barge Unit 8	26	113	4, 9, 10	Fort Hill	1980	AR	No cultural resources within EIS area	100' ROW	218

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Belco Petroleum BNG 111-4 well & access	26	113	4	Fort Hill	1980	WWC	No cultural resources	40 acre well, 100' ROW	219
NW Pipeline route for BNG 111-4	26	113	4	Fort Hill	1980	AS	No cultural resources	100' ROW	220
Texaco La Barge #8 well	26	113	10	The Hogsback	1980	WWC	No cultural resources	40 acre well	221
Unidentified block survey	26	113	2	La Barge	?	?	?	No information available on this block survey. Outline of study area copied from BLM map	222
NWP Lateral A-1 Loop 2	26 27 27	113 112 113	1, 2 31 36	La Barge	1982	AR	48LN1088, LN1089, 48SU256, SU257, SU258, SU259; 3 IF's (biface, flake, fire-cracked quartzite)	100' ROW	223
Texaco La Barge In-fill wells	26 27	113 113	3 27, 34	The Hogsback	1982	AR	No new cultural resources	Survey of 15 in-fill wells, averaging 5-10 acres per well; total survey area app. 175 acres	224
Davis Oil Parrish Mark Unit #1 access reroute	27 27	108 109	18 1, 2, 3, 4, 5	Teakettle Butte, Sugar Loaf	1978	AS	No cultural resources within EIS area	100' ROW	225
Davis Oil Sugar Loaf Unit #1 & Terry Island Unit #1 access roads	27 28	109 109	6 13, 24, 26, 27, 28, 29, 31, 32 33	Sugar Loaf, Sugar Loaf NE	1978	WWC	IF (scraper) within EIS area	100' ROW	226
NW Pipeline Energetics Fed 20-8 pipeline	27 27	110 111	6, 7 2, 11, 12	Oasis Well	1981	AR	No cultural resources within EIS area	100' ROW	227
NWP Primary Fuels Federal #20-24 pipeline	27	110	8, 9, 10 14, 15, 23 24	Oasis Well	1982	AR	No curtural resources within EIS area	100' ROW in Sec. 23, 8, 9	228

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
NWP well line to Woods Petroleum Cutlass Unit No. 2	27 28	110 109	1, 2, 3, 4, 5, 6 19, 29, 30 31, 32	Oasis Well, Sugar Loaf, Sugar Loaf NE	1982	AR	No cultural resources within EIS area	100' ROW	229
Nortex Oil & Gas 093 #1-2 well & access	27	111	2	La Barge SE	1981	PEC	No cultural resources	40 acre well pad, 100' ROW	230
NW Pipeline Fed 42-11 pipeline	27	111	2, 11	La Barge, Oasis Well	1980	AS	No cultural resources	200' ROW	231
Energetics 42-11 well area & access	27	111	11	La Barge	1979	WWC	No cultural resources	160 acre well area	232
Cabot Corp 1-14 & 1-23 wells, access & alternate access	27	111	14, 23, 24	La Barge SE	1977	BLM	No cultural resources within EIS area	Well pad dimensions & ROW width not given in report	233
NW Pipeline Lateral A-26	27	111	3, 4, 5, 10, 11, 15, 16, 19, 22, 23, 26, 27, 28, 30, 31, 32, 33, 34	La Barge SE	1979	AS	No cultural resources within EIS area	100' ROW	234
NW Exploration well (no name or number)	27	112	4	La Barge	1975	BLM	No cultural resources	40 acre well pad area	235
J. B. Roden Drilling Tarter Island Unit 1-4 well & access	27	112	4	La Barge	1978	PEC	No cultural resources	Well pad dimensions not given; 100' ROW	236
NW Pipeline Belco 60-17 pipeline	27	112	17, 18	La Barge	1979	AS	No cultural resources	100' ROW	237
NW Pipeline Belco 60-17 pipeline	27	112	17, 18	La Barge	1979	WWC	No cultural resources	ROW width not given in report	238

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
NW Pipeline Tarter Island 1-33 & 3-4 pipelines	27 28	112 112	4 33	La Barge	1975	BLM	No cultural resources	ROW width not given in report	239
Belco Petroleum Green River Bend Unit 59-7 well & access	27	112	7	La Barge	1979	WWC	No cultural resources	40 acre well pad, ROW width not given (snow monitor)	240
Belco Petroleum Red Hill 1-18 well, access & pipeline	27	112	7, 18	La Barge	1979	WWC	48SU74	40 acre well pad, 100' ROW	241
Belco Petroleum Green River Bend Unit 69-19 well & access	27	112	30	La Barge	1979	WWC	No cultural resources	40 acre well pad, 50' ROW	242
Belco Petroleum Green River Bend Unit 69-19 well & access	27	112	19	La Barge	1979	WWC	No cultural resources	40 acre well, 50' ROW	243
NW Pipeline 69-19 pipeline	27	112	19	La Barge	1979	AS	No cultural resources	100' ROW	244
Belco Petroleum Green River Bend Unit 70-19 well & access	27	112	19	La Barge	1979	WWC	No cultural resources	40 acre well pad, 100' ROW	245
Belco Petroleum 70-19 pipeline	27	112	19	La Barge	1979	WWC	No cultural resources	100' ROW	246
NW Pipeline Belco Red Hill 1-18 pipeline	27	112	7, 18	La Barge	1980	AS	No cultural resources	100' ROW	247
NW Pipeline Belco 73-17 pipeline	27	112	17	La Barge	1980	AS	No cultural resources	200' ROW	248
Belco Petroleum Green River Bend Unit 73-17 well & access	27	112	8, 17	La Barge	1980	WWC	No cultural resources	40 acre well pad, 100' ROW	249

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Belco Petroleum Green River Bend Unit 75-31 well	27	112	31	La Barge	1980	WWC	No cultural resources	40 acre well pad	250
NW Pipeline Belco 74-31 pipeline	27	112	31	La Barge	1980	AS	No cultural resources	400' ROW	251
Belco Petroleum Green River Bend Unit 74-31 well	27	112	31	La Barge	1980	WWC	No cultural resources	40 acre well	252
NWP Lateral N-20 Extension 1 (original and reroute)	27	112	4, 8, 9	Chimney Butte,	1982	AR	48SU244	100' ROW	253
	28	112	28, 29, 33	La Barge					
FMC Corp. gas pipeline	27	112	4, 5, 8, 9, 15, 16, 22, 23, 24 25	La Barge, La Barge SE, Chimney Butte	1982	AR	48SU213, SU487, SU488 SU489, SU490, SU491, SU492 SU493 within EIS area	Combination of Class I inventory and 100' ROW in Class III areas	254
	28	112	29, 30, 32, 33						
	28	113	36						
Western Oil Refinery pipeline	27	113	9, 16	The Hogsback	1978	BLM	No cultural resources	No report	255
NWP line north to La Barge	27	113	9	The Hogsback	1978	WWC	No cultural resources	No report	256
Mtn. Bell cable #27429 ROW	27	113	17, 18	The Hogsback	1982	WWC	IF (biface)	100' ROW	257
Chevron USA Birch Creek Unit #1 pipeline	27	113	15	The Hogsback	1980	WWC	No cultural resources	100' ROW	258
Chevron USA Birch Creek Unit #4 pipeline	27	113	26	La Barge	1980	WWC	No cultural resources	100' ROW	259

TABLE 1-I (Continued)

	Location								Proj.
Project Name	TN	RW	Sec.	USGS Quad	Year	By Whom*	Results	Methods	No.
NW Pipeline Belco 72-27 pipeline	27	113	27	The Hogsback	1980	AS	No cultural resources	200' ROW	260
Belco Petroleum Green River Bend Unit 72-27 well	27	113	27	The Hogsback, La Barge	1980	WWC	IF (flake)	40 acre well (construction snow monitored)	261
Texaco La Barge Unit #7 well	27	113	27, 34	The Hogsback	1980	WWC	No cultural resources	40 acre well pad	262
Western Oil 9-17 well	27	113	8, 17	The Hogsback	1980	WWC	No cultural resources	25-30 acre well location	263
Mobil Oil tank battery location, access, & transmission line	27	113	8	The Hogsback	1981	WWC	IF (mountain sheep horn)	40 acre tank location, 100' ROW for access & transmission line	264
Western Oil well & access	27	113	9	The Hogsback	1978	WWC	No cultural resources	80' around centerstake, 30' ROW	265
Belco Petroleum pipeline for La Barge Unit 27-17	27	113	17	The Hogsback	1979	WWC	No cultural resources	100' ROW	266
Mtn. Bell buried cable #20664	27	113	22	The Hogsback	1979	WWC	No cultural resources	50' ROW	267
Western Oil 8-17 well	27	113	17	The Hogsback	1980	WWC	No cultural resources	40 acre well location	268
Mobil Oil pipeline to well 76-20	27	113	20, 21, 27, 28	The Hogsback	1981	WWC	No cultural resources	No ROW dimension in report	269
NWP La Barge Unit 25-5 (Big Piney Gathering System)	27	113	5	The Hogsback	1978	UW	No cultural resources	No ROW dimension in report	270
Texaco well location & equipment platform	27	113	34	The Hogsback	1978	WWC	No cultural resources	300 x 300 yard area surveyed (no name or number)	271

TABLE 1-I (Continued)

Project Name	Location TN	 RW	 Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
NW Pipeline ROW to Texaco La Barge Unit #7 (alternate route)	27	113	34	The Hogsback	1981	AR	No cultural resources	100' ROW	272
Mtn. Bell buried telephone cable	27	113	18	The Hogsback	1981	WWC	No cultural resources	50' ROW	273
Texaco TP-1, TP-7, TP-9, TI-1 thru TI-4, TP-3, TO-1 well pads	27	113	27, 34	The Hogsback	1981	WWC	48SU150	40 acre well pad (snow monitored during construction)	274
NW Pipeline Belco 63-35 pipeline	27	113	35, 36	La Barge	1979	AS	No cultural resources	100' ROW	275
Belco Petroleum Green Bend Unit 63-25 well & access	27	113	35, 36	La Barge	1979	WWC	No cultural resources	40 acre well pad, ROW width not given (snow monitor)	276
Lincoln Service Co. tap power lines	27	114	13, 25	The Hogsback	1978	WWC	IF (end scraper)	50' ROW	277
Mtn. Fuel pipeline to Dry Piney Unit #27	27	114	14	The Hogsback	1978	WWC	No cultural resources	100' ROW	278
Mtn. Fuel Dry Piney containment pond	27	114	12	The Hogsback	1978	WWC	No cultural resources	600' x 600' area	279
Mtn. Fuel Dry Piney Unit #28 & access	27	114	2	The Hogsback	1979	WWC	No cultural resources	40 acre well pad, 100' ROW	280
Mtn. Fuel Dry Piney #28 pipeline lateral	27	114	2	The Hogsback	1979	WWC	No cultural resources	100' ROW	281
Exxon Graphite Well #1 & 2 & access roads	27	114	4, 5, 8, 16, 17	Lake Mountain	1979	WWC	No cultural resources	40 acre well pad, 100' ROW	282
NW Pipeline Piney gathering system 1-26	27	114	23, 24	The Hogsback	1980	AS	No cultural resources	200' ROW	283

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Petroleum, Inc. 1-26 well, access & access realignment	27	114	23	The Hogsback	1979	WWC	48SU51	30 acre well pad, 100' ROW	284
NWP line to Energetics Sugarloaf Mohr Federal 10-8	28 28	110 111	6, 7, 8 1, 2, 8 9, 10, 11	Milleson Draw, Sugar Loaf NW	1982	AR	No cultural resources	100' ROW	285
C & K Petroleum well & access (no name)	28	111	17	Milleson Draw	1977	WWC	No cultural resources	Well pad dimensions and ROW width not given	286
C & K Petroleum SCW Fed #1 access	28	111	27, 28 29	Milleson Draw	1977	WWC	48SU386 (monitored during construction; no buried materials found)	ROW width not given in report	287
NW Pipeline USA Reardon 17-1 pipeline	28	111	17	Milleson Draw	1980	AS	No cultural resources	200' ROW	288
Woods Petroleum USA Reardon 17-1 well & access	28	111	17	Milleson Draw	1980	AS	No cultural resources	40 acre well pad, 100' ROW	289
NWP Lateral A-27 Extension 4 pipeline ROW	28 29	111 111	5, 8, 17, 18 22, 27, 34	Milleson Draw	1982	AR	No cultural resources	100' ROW	290
NW Pipeline Big Piney Gathering Lateral A-27 Extension	28 28 27	111 112 111	17, 18, 31 13, 24, 25, 36 6	Milleson Draw, La Barge SE	1980	AS	No cultural resources	200' ROW	291
Belco Petroleum Chapel Canyon 3-18 well & access	28	111	17, 18	Milleson Draw	1982	AR	48SU453, 454	40 acre well pad, 100' ROW	292
Energetics 10-31 well & access	28	111	27, 28, 29 30, 31, 34 35, 36	Milleson Draw, La Barge SE	1981	MZ	No cultural resources within project area	40 acre well pad, 100' ROW	293

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Belco Petroleum Tarters Island 6-2 well & access	28	112	2	Milleson Draw, Chimney Butte	1981	PEC	No cultural resources	40 acre well pad, 100' ROW	294
NW Pipeline Tarters Island 5-13 pipeline	28	112	13, 24	Milleson Draw	1980	AS	No cultural resources	200' ROW	295
Belco Petroleum Tarters Island 4-15 well & access	28	112	15	Milleson Draw, Chimney Butte	1978	BLM	No cultural resources	Well pad dimensions and ROW width not given in report	296
Wyoming Highway Dept. gravel pit	28	112	13	Milleson Draw	1982	UW	No cultural resources	25 acre pit	297
NWP Gobbler's Knob Trunk "A" pipeline and limited reroute	28	112	3, 9, 10, 16, 17, 18, 19	Chimney Butte, Milleson Draw, Big Piney East, Ross Butte, Mesa Springs, Two Buttes Reservoir	1982	AR	48SU221, SU222, SU239, SU242 within EIS area	Portion of 32 mile length within EIS area. No ROW width given in report. Portions of original line rerouted. Surface inventory and testing program recommended for 28-112, 3, 9, 10	298
	28	113	24						
	29	111	5, 8, 17, 19, 20, 30 31						
	29	112	36						
	30	110	5, 7, 8, 18						
	30	111	13, 23, 24, 26, 27, 32 33, 34						
	31	109	3, 4, 8, 9, 17, 19, 20, 30						
	31	110	25, 26, 27, 28, 32, 33						
NW Pipeline Tarters Island 4-15 pipeline	28	112	15, 16, 17, 18	Chimney Butte	1979	AS	No cultural resources	100' ROW	299
NW Pipeline Belco Tarters Island pipeline	28 29	112 112	2, 3, 4 34, 35	Chimney Butte	1981	AR	48SU402	100' ROW	300

TABLE 1-I (Continued)

	Location								
Project Name	TN	RW	Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Belco Petroleum Chimney Butte Unit 21-35 well	28	113	35	La Barge	1979	WWC	48SU45	40 acre well pad	301
Belco Petroleum Chimney Butte Unit 22-35 well	28	113	35	La Barge	1979	WWC	No cultural resources	40 acre well pad	302
Belco Petroleum Chimney Butte Unit 22-35 pipeline	28	113	35	La Barge	1979	WWC	No cultural resources	100' ROW	303
NW Pipeline Belco Chimney Butte 21-35 pipeline	28	113	35	La Barge	1979	AS	48SU45, 46	100' ROW	304
Belco Petroleum C77-23 well & access	28	113	22, 23	Chimney Butte	1981	PEC	No cultural resources	40 acre well pad, 50' ROW	305
Belco Petroleum C77-23 pipeline	28	113	23	Chimney Butte	1981	AR	No cultural resources	40 acre well pad, 50' ROW	306
NW Pipeline Belco C76-25 pipeline	28	113	25	Chimney Butte	1981	AR	No cultural resources	100' ROW	307
NW Pipeline Piney Gathering System Belco C73-23 pipeline	28	113	23	Chimney Butte	1980	AS	No cultural resources	400' ROW	308
Belco Petroleum C76-25 well	28	113	25	Chimney Butte	1981	PEC	No cultural resources	40 acre well pad	309
Belco Pipeline ROW Chimney Butte 20-34	28	113	33, 34	Cretaceous Mtn., The Hogsback	1979	AS	No cultural resources	100' ROW	310
Belco Big Piney Mesa Verde 14-75 well & pipeline	28	113	3	Cretaceous Mtn.	1980	PEC	No cultural resources	40 acre well pad, 100' ROW (for access and pipeline)	311

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mobil Oil Tiptop Unit 32-6-G & access	28	113	6	Cretaceous Mtn.	1978	WWC	No cultural resources	22 acre well pad, 100' ROW	312
NW Pipeline Tiptop T22-17-G pipeline	28	113	8, 17	Cretaceous Mtn.	1980	AS	No cultural resources	100' ROW	313
NW Pipeline Tiptop Unit F-31-17G pipeline	28	113	8, 17	Cretaceous Mtn.	1975	BLM	No cultural resources	ROW width not cited	314
Mobil Oil Tiptop Unit T22-17-G	28	113	17	Cretaceous Mtn.	1979	WWC	IF (flake)	40 acre well pad, access within 40 acres	315
Mobil Oil Tiptop Unit T11-20-G & access	28	113	20	Cretaceous Mtn.	1979	WWC	IF (flake)	40 acre well pad, 100' ROW	316
NW Pipeline natural gas pipeline	28	113	5, 6, 7	Cretaceous Mtn.	1975	BLM	No cultural resources	ROW width not cited	317
NW Pipeline Tiptop Unit 32-6-G pipeline	28	113	6	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	318
Mobil Oil F-27-6-G well location	28	113	6	Cretaceous Mtn.	1978	WWC	No cultural resources	15 acre well pad area	319
Mobil Oil Tiptop Unit 51X-29-G & access	28	113	19	Cretaceous Mtn.	1978	WWC	No cultural resources	40 acre well pad, ROW width not given	320
NW Pipeline Tiptop T27-6-G pipeline	28	113	6	Cretaceous Mtn.	1981	AR	No cultural resources	ROW width not given	321
Mtn. Bell buried telephone cable	28	113	20	Cretaceous Mtn.	1978	WWC	No cultural resources	100' ROW	322
Mobil Tiptop Unit T77-16S & access	28	113	16, 21	Cretaceous Mtn.	1980	WWC	No cultural resources	40 acre well pad, 100' ROW	323
Mobil Tiptop Unit F22-22 & access	28	113	22	Cretaceous Mtn.	1975	BLM	48SU353	Well area and ROW width not given in report	324

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mobil Tiptop Unit F31-17G & access	28	113	17	Cretaceous Mtn.	1975	BLM	No cultural resources	Well area and ROW width not given in report	325
NW Pipeline TT22-22 Unit pipeline	28	113	22	Cretaceous Mtn.	1975	BLM	Notes one site, but no location, number or legal description. May be 48SU353 (?).	ROW width not given; route may be erroneously plotted on map (may serve well F-22-22).	326
Belco C77-23 well & access	28	113	23	Chimney Butte	1981	PEC	No cultural resources	40 acre well pad, 50' ROW	327
NW Pipeline C77-23 pipeline	28	113	23	Chimney Butte	1981	AR	No cultural resources	100' ROW	328
NW Pipeline T-1 lateral loop	28 28	113 114	20, 17, 18, 19 24, 13	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	329
NW Pipeline Belco C73-23 pipeline	28	113	23	Chimney Butte	1980	AS	No cultural resources	400' ROW	330
Belco Tiptop Shallow Unit Well #1 & access	28	113	28	Cretaceous Mtn.	1979	WWC	No cultural resources	40 acre well pad, 100' ROW	331
NW Pipeline Cathodic Protection Station #1309	28	113	30	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	332
Mobil Oil 36-32 well & access	28	113	32	The Hogsback	1979	WWC	IF (flake)	40 acre well pad, 100' ROW	333
Lincoln Service Co. powerline tap	28	113	32, 33	The Hogsback	1977	WWC	No cultural resources	ROW width not cited	334
Mtn. Bell buried telephone cable	28	113	32, 33	The Hogsback	1979	WWC	No cultural resources	100' ROW	335
NW Pipeline BNG #103-33 pipeline	28	113	33	The Hogsback	1978	WWC	No cultural resources	100' ROW	336

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
NW Pipeline Belco DNG #100-33 pipeline	28	113	33	The Hogsback	1979	AS	No cultural resources	100' ROW	337
Mobil Tiptop Unit F44-7G	28	113	7	Cretaceous Mtn.	1978	WWC	No cultural resources	No well pad dimensions given	338
NW Pipeline Tiptop F44-7G pipeline	28	113	7	Cretaceous Mtn.	1978	UW	No cultural resources	ROW width not cited	339
Mobil Oil well	28	113	7	Cretaceous Mtn.	1978	WWC	No cultural resources	No report. Approx. 1 acre	340
Belco Mesa Verde 14-48 well and access	28	113	3	Chimney Butte, Cretaceous Mtn.	1982	AR	No cultural resources	Same 40 acre location surveyed for Belco 14-47	341
Belco B.N.G. 112-21 well and access	28	113	21	Cretaceous Mtn.	1982	AR	48SU253	40 acre well pad	342
Belco DNG 100-33 well	28	113	33	The Hogsback	1977	WWC	No cultural resources	No dimensions given in report	343
Belco Mesa Verde Unit #14-47 well and access	28	113	3	Chimney Butte, Cretaceous Mtn.	1982	AR	No cultural resources	40 acre well location	344
Belco Mesa Verde Unit 14-49 well	28	113	3	Cretaceous Mtn., Chimney Butte	(Oct.) 1982	AR	No cultural resources	40 acre well	345
Belco Mesa Verde 14-76	28	113	3	Cretaceous Mtn. Chimney Butte	(Sept.) 1982	AR	No cultural resources	Same 40 acre location surveyed for Belco 14-49	346
Belco Petroleum block survey	28 27	113 113	20, 21, 28 29, 32, 33 4	Cretaceous Mtn., The Hogsback	1977	WWC	48SU37 thru SU41 and 1 IF (not described)	Block is only partially within EIS area	347
Mobil Tiptop Unit 53-2-G well	28	114	2	Cretaceous Mtn.	1978	WWC	No cultural resources	22 acre well pad, 100' ROW	348
Mobil Tiptop Unit 27-24-G well & access	28	114	24	Cretaceous Mtn.	1978	WWC	No cultural resources	22 acre well, 100' ROW	349

TABLE 1-I (Continued)

Project Name	Location TN	Location RW	Location Sec.	USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
Mobil Tiptop Unit F11-24-G well	28	114	24	Cretaceous Mtn.	1978	WWC	No cultural resources	33 acre well pad area	350
Mobil Tiptop Unit 68-24-G well & access	28	114	24	Cretaceous Mtn.	1978	WWC, BLM	No cultural resources	23 acre well pad area; ROW width not given (2 surveys done of same area; no reason given)	351
Mobil Tiptop Unit F14-13-G well & access	28	114	13	Cretaceous Mtn.	1978	WWC	No cultural resources	33 acre well pad area; ROW width not given	352
Exxon Fogarty Cr. Unit 13-28 well & access	28	114	28	Pine Grove Ridge, Cretaceous Mtn.	1981	WWC	IF (flake)	40 acre well area, 100' ROW	353
Petro-Search #5-32 Fogarty Cr. well	28	114	32	Lake Mtn.	1976	JA	No cultural resources	Well pad site not given in report; no mention of access	354
Petro-Search C. F. Brown #3-4 Fogarty Cr. well	28	114	4	Pine Grove Ridge	1976	JA	No cultural resources	No map with report; exact location unknown; area of survey unknown	355
Petro-Search C. F. Brown #4-17 Fogarty Cr. well	28	114	17	Pine Grove Ridge	1976	JA	No cultural resources	No map with report; exact location unknown; area of survey unknown	356
NW Pipeline Christmann Allen pipeline	28	114	15, 22, 27 28, 21, 20	Pine Grove Ridge, Cretaceous Mtn.	1978	WWC	No cultural resources	100' ROW	357
Belco Petroleum Fogarty Creek 11-24 well & access	28 28	114 115	20 24	Pine Grove Ridge	1980	PEC	No cultural resources	100' ROW	358
Petro-Search 9-21 well & access	28	114	22, 21, 20	Pine Grove Ridge, Cretaceous Mtn.	1977	BLM	No cultural resources	Well pad dimensions and ROW width not cited	359
NW Pipeline Cathodic Protection Sta. #779	28	114	1	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	360

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mobil Oil Tiptop Unit 55X-2G well & access	28	114	2	Cretaceous Mtn.	1977	BLM	No cultural resources	No dimensions or ROW width within report	361
NW Pipeline Belco Fogarty Cr. #10-8 pipeline	28	114	4, 8, 9	Pine Grove Ridge	1979	AS	No cultural resources	100' ROW	362
Exxon Fogarty Cr. 12-5 well & access roads	28 28	114 115	3, 4, 5 1, 10, 11, 3	Pine Grove Ridge	1981	WWC	48SU177	40 acre well pad, 80 acre ROW	363
Petro-Search Fogarty Cr. 7-9 well & access	28	114	9	Pine Grove Ridge	1977	BLM	No cultural resources	Well pad dimension and ROW width not cited	364
Colorado River Cut-throat Trout project B-2 fenceline	28	114	9, 10, 11	Pine Grove Ridge, Cretaceous Mtn.	1980	BLM	48SU127-128, IF (flake)	100' ROW	365
Exxon Fogarty Creek #12-10 well	28	114	10	Pine Grove Ridge	1982	AR	No cultural resources	40 acre well	366
Belco Fogarty Creek #10-8	28	114	8	Pine Grove Ridge	1978	WWC	No cultural resources	No report	367
NWP ROW	28	114	16	Pine Grove Ridge	1977	UW	No cultural resources	No report	368
Professional Exploration Co. access and well	28	114	17, 20	Pine Grove Ridge	1977	WWC	No cultural resources	No report	369
Mtn. Fuel Supply gas pipeline	28	114	32, 33, 34	Lake Mtn.	1975	BLM	No cultural resources	No report	370
Exxon Lake Ridge Unit #1 well & access	28	115	3, 4, 10	Pine Grove Ridge	1980	WWC	No cultural resources	40 acre well pad, 100' ROW	371
Dome Petroleum Sawmill Fed #1 well & access	28 27	115 115	26 1	Pine Grove Ridge, Lake Mountain	1978	PEC	No cultural resources	40 acre well pad, 50' ROW; exact location of pad and access road unknown	372

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Granite Flats BLM Class III linear inventory	29 30	110 110	3, 10 32	Ross Butte	1979	BLM	Ross Butte 11-17	3-160 acre E-W transects within EIS area	373
Davis Oil access road	29 30	110 110	4, 9 33	Ross Butte	1977	WWC	No cultural resources	No information	374
Primary Fuels #24-20 well	29	111	20	Milleson Draw	?	?	No cultural resources	No report	375
NWP well line to Primary Fuels Federal 24-20	29	111	20	Milleson Draw	1982	AR	No cultural resources	100' ROW	376
AQ Air Quality Station	29	112	33	Chimney Butte	1982	AR	No cultural resources	40 acre area	377
Belco Petroleum "P" Sand Unit well and access	29	112	30	Chimney Butte	1982	AR	No cultural resources within EIS area	40 acre well	378
NWP well line to Terra Resources Fed. #1-17	29	112	17, 20, 28, 29, 33	Chimney Butte	1982	AR	48SU267, SU268, SU269	100' ROW	379
Mesa Petroleum 1-20 Big Piney well & access	29	112	17, 20	Chimney Butte	1979	PEC	No cultural resources	40 acre well pad, 50' ROW	380
NW Pipeline Tiptop T57-19 pipeline	29	113	19, 30	Cretaceous Mtn.	1981	AR	No cultural resources	100' ROW	381
Mobil Oil gas pipeline (no name/number)	29	113	28	Cretaceous Mtn.	1975	BLM	No cultural resources	ROW width not given in report	382
Mobil Oil gas pipeline (no name/number)	29 28	113 113	28, 33 6	Cretaceous Mtn.	1975	BLM	No cultural resources	ROW width not given in report	383
NW Pipeline W-54865 pipeline	29	113	33	Cretaceous Mtn.	1975	BLM	No cultural resources	ROW width not given in report	384

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mobil Oil Tiptop Unit F12-33G well & access	29	113	33	Cretaceous Mtn.	1975	BLM	No cultural resources	Well pad dimensions and ROW width not given in report	385
NW Pipeline Tiptop 22-28G pipeline	29	113	28	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	386
NW Pipeline Tiptop T35-20G pipeline	29	113	20, 29	Cretaceous Mtn.	1980	AS	No cultural resources	100' ROW	387
Mobil Oil block survey for well (no name/number)	29	113	29	Cretaceous Mtn.	1975	BLM	48SU354	No information	388
Big Piney Oil & Gas 35-14 well & access	29	113	35	Cretaceous Mtn.	1981	PEC	No cultural resources	40 acre well location	389
NW Pipeline Tiptop F75-32G pipeline	29	113	32, 33	Cretaceous Mtn.	1978	UW	No cultural resources	ROW width not cited	390
Mobil Oil Tiptop Unit 22-28G well & access	29	113	27, 28	Cretaceous Mtn.	1978	WWC	3 IFs (2 flakes, 1 point, possibly Late Paleo or Early Archaic); isolated hearth, possibly recent, no site designation	22 acre well pad, 100' ROW	391
Mobil Oil Tiptop Unit 72-19G well & access	29	113	19, 20, 29	Cretaceous Mtn.	1978	WWC	No cultural resources	22 acre well pad, 100' ROW	392
Mobil Oil Tiptop Unit 72-20G well & access	29	113	20	Cretaceous Mtn.	1978	WWC	No cultural resources	22 acre well pad, 100' ROW	393
Mobil Oil Tiptop Unit F21-29G well & access	29	113	29	Cretaceous Mtn.	1975	BLM	No cultural resources	Well area and ROW dimensions not cited	394
Mobil Oil Tiptop Unit T35-20G well	29	113	20	Cretaceous Mtn.	1979	WWC	No cultural resources	40 acre well pad	395
Mobil Oil Tiptop Unit T85-19G well & access	29	113	19, 20	Cretaceous Mtn.	1979	WWC	2 IFs (side scraper, flake)	40 acre well pad, 100' ROW	396

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mobil Oil Tiptop Unit T75-32G well & access	29	113	32	Cretaceous Mtn.	1978	WWC	No cultural resources	Well pad dimensions and ROW width not cited	397
Gulf Energy & Minerals water pipeline	29	113	14, 23, 26	Cretaceous Mtn.	1977	WWC	IF (Late Prehistoric point)	No topo map of ROW available	398
Exxon proposed plant site	29	113	33, 34	Cretaceous Mtn.	1982	AR	48SU502, SU503, SU504, SU505	100' transect intervals of block area	399
Belco Mesa Verde Unit #15-28 well and access	29	113	36	Chimney Butte, Cretaceous Mtn.	1982	AR	48SU195	40 acre well and 500' block adjacent	400
Belco Petroleum well	29	113	24	Cretaceous Mtn.	1976	BLM	No cultural resources	2 1/2 acre well area	401
Mobil Oil well	29	113	29	Cretaceous Mtn.	1975	BLM	No cultural resources	40 acre well	402
NWP pipeline ROW	29	113	29	Creteceous Mtn.	?	BLM	No cultural resources	No report	403
Unnamed pipeline ROW	29	113	28	Cretaceous Mtn.	?	BLM	No cultural resources	No report	404
Timber reseeding survey	29	114	5, 6, 8	Springman Creek	1982	BLM	48SU550, SU551	Intensive survey of 3 tracts totalling approx. 45 acres	405
Belco Big Piney Mesa Verde 15-26	29	113	36	Cretaceous Mtn.	1980	WWC	IF (utilized flake)	40 acre well location	406
Belco Big Piney Mesa Verde 1-83	29	113	14	Cretaceous Mtn., Deer Hill	1980	WWC	No cultural resources	40 acre well location	407
NW Pipeline Belco-Thompson 3-8 pipeline	29	113	8	Deer Hill	1979	AS	No cultural resources	100' ROW	408
NW Pipeline Tiptop 72-20G pipeline	29	113	20	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	409
Mobil Oil Tiptop Unit 13-16S well	29	113	16	Cretaceous Mtn.	1981	WWC	No cultural resources	40 acre well pad	410

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
Mobil Oil Tiptop Unit 57-19 well & access	29	113	19, 20	Cretaceous Mtn.	1980	WWC	No cultural resources	40 acre well pad, 100' ROW	411
NW Pipeline T-3 lateral	29	113	19, 20, 21, 28	Cretaceous Mtn.	1979	AS	No cultural resources	100' ROW	412
Mobil Oil powerlines 1, 2, 3	29	113	19, 20, 28, 29	Cretaceous Mtn.	1981	WWC	IF (biface fragment)	100' ROW	413
Mobil Oil Tiptop Unit T78-20G & access	29	113	20, 29	Cretaceous Mtn.	1980	WWC	48SU111	40 acres	414
American Quasar Riley Ridge Fed 8-42 well	29	114	8, 17	Springman Creek	1979	AS	No cultural resources	40 acre well pad	415
American Quasar Riley Ridge 10-14 well & access	29	114	10, 15	Springman Creek	1980	JA	No cultural resources	40 acre well pad, 100' ROW	416
American Quasar Riley Ridge 10-14 alternate access	29	114	10, 15, 14, 13	Springman Creek, Deer Hill	1980	MZ	IF (undiagnostic point)	100' ROW	417
Tierra Resources 1-12 Fed. well & access	29	114	11, 12, 13, 14	Springman Creek, Deer Hill	1980	PEC	No cultural resources	40 acre well pad, 100' ROW	418
Apache 1-13 Spring Cr. well & access	29	114	13	Cretaceous Mtn.	1977	WWC	IF (no description given)	Well pad dimensions and ROW width not given; exact locations unknown	419
American Quasar Riley Ridge 17-34 access	29	114	10, 16, 17	Pine Grove Ridge, Springman Creek	1981	WWC	IF (flake)	100' ROW	420
American Quasar Riley Ridge 14-24 well & access	29	114	14	Pine Grove Ridge	1980	JA	No cultural resources	40 acre well pad, 100' ROW	421

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
American Quasar Riley Ridge 17-34 well	29	114	17	Pine Grove Ridge	1980	JA	No cultural resources	40 acre well pad	422
Apache well & access (no name/number)	29	114	17	Pine Grove Ridge	1977	WWC	No cultural resources	Well pad dimension and ROW width not given; access route appears to be a corridor 400-600' wide	423
American Quasar well (no name/number)	29	115	12	Springman Creek	1980	JA	Lander cut-off of Oregon Trail (48SU387), 1800' segment eroded. Archaeologist did not consider this segment to be NR eligible; clearance recommended.	80 acre area	424
Exxon Porcupine Cr. #1 well & access	29	115	20, 29, 28 27, 34, 35	Mt. Thompson	1978	WWC	No cultural resources	12 acre well area, 100' ROW	425
NW Pipeline Big Piney Gathering System, Belco S26-33 pipeline	30	113	33, 34	Deer Hill	1978	UW	No cultural resources	ROW width not given in report	426
Belco Petroleum well S32-33	30	113	33	Deer Hill	1980	PEC	No cultural resources	40 acre well location	427
Belco Petroleum pipeline between wells S22-33 & S27-33	30	113	33	Deer Hill	1979	WWC	No cultural resources	100' ROW	428
Belco Pipeline S25-34	30	113	34	Deer Hill	1979	AS	No cultural resources	100' ROW	429
Belco S33-28 well & access	30	113	28	Deer Hill	1981	PEC	No cultural resources	40 acre well, 100' ROW	430
NW Pipeline Belco S33-28 pipeline	30	113	28	Deer Hill	1981	AR	48SU153	100' ROW	431

TABLE 1-I (Continued)

Project Name	Location			USGS Quad	Year	By Whom*	Results	Methods	Proj. No.
	TN	RW	Sec.						
NW Pipeline Belco S32-33 ROW	30	113	33	Deer Hill	1981	AR	48SU152	100' ROW	432
Belco S 34-34 well	30	113	34	Deer Hill	1982	AR	No cultural resources	40 acre well	433
American Quasar Riley Ridge 33-24 well and access	30 29	114 114	33 3, 4	Springman Creek	1981	SA	No cultural resources	40 acre well location	434
Bird Creek Timber Sale borrow pit	30	115	1	Springman Creek	1979	USFS	48SU50	1 acre borrow area	435

TABLE 1-II

PREVIOUS CULTURAL RESOURCE INVESTIGATIONS LISTED BY RILEY RIDGE PROJECT FACILITIES

PROPOSED ACTION

Well Field Units

(ii.a) Darby Mt. Unit (AQ) (DMU)
425

(ii.b) North Riley Ridge Unit (AQ) (NRRU)
434, 435

(ii.c) Sawmill Area (W) (SA)
417-419, 421

(ii.d) Riley Ridge Unit (AQ) (RRU)
405, 415-417, 420, 422-424

(ii.e) Lake Ridge Unit (EX) (LRU)
371, 372, 425

(ii.f) Tip Top Unit (M) (TTU)
305, 306, 308, 312-335, 338-340, 342, 347-353, 357, 359-361, 365, 381-383, 386-388, 390-397, 402-404,
408-414 [310, 336, and 337 are within road right-of-way connecting unit to Big Mesa Plant Site (E)]

(ii.g) Fogarty Creek Unit (EX) (FCU)
353-359, 362-370

(ii.h) Graphite Unit (EX) (GU)
282, 372

(ii.i) Dry Piney Unit (EX) (GU)
278-283

TABLE 1-II (Continued)

(ii.j) Hogsback Unit (M) (HU)
217, 257, 269, 273, 277, 283, 284 (274 is within road rights-of-way associated with unit, but outside unit boundaries)

Non-linear facilities

(ii.k) Big Mesa Plant Site (EX) (BM)
347

(ii.l) Craven Creek Plant Site (NWP) (CC)
143

(ii.m) Sulfur Loadout (EX) (SL)
104

(ii.n) West Dry Basin Plant Site
399

Linear Facilities

(ii.o) Railroad spur to Craven Creek Site (NWP) (RR-CC)
104-109, 143

(ii.p) Transmission line from NPP to East Dry Basin (AQ+EX) (TL-1, TL-2, TL-EDB)
3, 36, 64, 66, 106, 111, 140, 159, 161-163, 167, 177, 181, 199-202, 208, 210, 211, 213, 235-237, 239, 241-246, 248-251

(ii.q) Transmission line branch to West Dry Basin (EX) (TL-WDB)
296, 298, 311, 406

(ii.r) Transmission line branch to Big Mesa (EX) (TL-BM)
240, 241, 247-249, 258

(ii.s) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)
104, 105

TABLE 1-II (Continued)

(ii.t) Transmission line from NPP to Craven Creek site (NWP) (TL-N-CC)
3, 36, 63, 65-68, 71, 104, 105, 107, 143

(ii.u) Sour gas trunkline to East Dry Basin (AQ) (SG-EDB-Q)
300, 311, 341, 344-346, 377, 379, 400, 406

(ii.v) Sour gas trunkline to East Dry Basin (W) (SG-EDB-W)
300, 377-379, 401, 407

(ii.w) Sour gas trunkline to West Dry Basin (EX) - within well field (SG-WDB) (taken from 7.5' series)
348, 360, 363, 396

(ii.x) Sour gas trunkline to Big Mesa (EX) (SG-BM) (taken from 7.5' series)
270, 333, 347-352, 361, 365

(ii.y) Sour gas trunkline to Craven Creek (NWP) (SG-CC)
150, 140, 143, 160, 161, 165, 166, 177, 178, 181, 182, 184, 205-210, 212-214, 216, 222, 223, 259-262, 264, 265, 267, 269-272, 274, 313, 315, 316, 321, 322, 329, 333-335, 338, 347

(ii.z) Sales gas pipeline from Craven Creek site (NWP) (S-CC)
105, 143

(ii.aa) Combined carbon dioxide and sales gas corridor from East Dry Basin (AQ) to Trailblazer (CS-EDB, CS-1, CS-2, CS-3)
1-6, 10-15, 37-39, 72, 74, 118-123, 148, 156, 170-176, 189-197, 227, 230-234, 287, 291, 293, 295-299

(ii.bb) Carbon dioxide and sales gas branch from West Dry Basin (EX) (CS-WDB)
299, 300, 311

(ii.cc) Carbon dioxide and sales gas branch from Big Mesa (EX) (CS-BM)
296, 299, 301-304, 307-309, 343

(ii.dd) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)
7-9, 16, 17, 19, 21-28, 30-34, 43-47, 49-55, 57, 58, 60, 62, 94-101, 142, 143

TABLE 1-II (Continued)

(ii.ee) Sulfur pipeline from West Dry Basin to loadout (EX) (SP-1, SP-WDB)
104, 105, 140, 160, 165, 166, 177-180, 182-184, 205-208, 210-213, 215, 222-224, 255, 256, 260-262, 264, 265, 267, 269-272, 274, 312-318, 322, 325, 329, 331, 333, 335, 339, 347

(ii.ff) Sulfur pipeline from East Dry Basin to West Dry Basin (AQ) (SP-EDB-WDB)
311

(ii.gg) Sulfur pipeline branch to Big Mesa (EX) (SP-BM)
No projects recorded

(ii.hh) Water pipeline from Green River to Craven Creek (NWP) (W-CC)
131, 136, 137, 143, 149-158

(ii.ii) Access road to Craven Creek (NWP) (A-CC)
105, 143

(ii.jj) Access road to Big Mesa (EX) (A-BM) (taken from 7.5' series)
301, 302, 304-306, 310, 343, 347

Component Alternatives

(ii.kk) Railroad to West Dry Basin (EX) (RR-WDB)
40-42, 79, 124-126, 185-188, 225, 226, 298, 300, 311, 341, 344-346, 373-377, 389, 400, 406

(ii.ll) Railroad spur from Craven Creek to Shute Creek (EX) (RR-SC)
142, 143

(ii.mm) West Dry Basin construction camp site (EX) (C-WDB)
380

(ii.nn) East Dry Basin construction camp site (AQ) (C-EDB)
No projects

(ii.oo) Big Mesa construction camp site (EX) (C-BM)
263, 264, 266, 268

TABLE 1-II (Continued)

(ii.pp) Buckhorn construction camp site (AQ) (C-BH)
No projects recorded

(ii.qq) Shute Creek construction camp site (EX) (C-SC)
No projects recorded

(ii.rr) Proposed transmission line from NPP to substation (UP & L)
3, 69-71, 112-117, 140, 144, 146, 147, 164, 168, 169, 177, 199-203, 207, 208, 210-213, 223, 235, 236, 238, 239, 242-246, 248-254

(ii.ss) Proposed transmission line to Shute Creek (EX) (UP&L)
105, 131, 133, 134, 136, 139-141

(ii.tt) Proposed transmission line to Craven Creek (NWP) (UP&L)
63, 105, 107-109, 143

(ii.uu) Proposed transmission line from Big Mesa (EX) to Buckhorn (AQ) (UP&L)
285, 286, 288, 289, 291, 292, 295-299, 301-304, 307, 309

(ii.vv) Proposed transmission line from East Dry Basin to West Dry Basin (UP&L)
377, 379, 389, 400, 406

(ii.ww) Proposed transmission line from East Dry Basin to substation (UP&L)
298, 300

BUCKHORN ALTERNATIVE

Well Field Units

(ii.a) Darby Mt. Unit (AQ) (DMU)
425

(ii.b) North Riley Ridge Unit (AQ) (NRRU)
434, 435

TABLE 1-II (Continued)

(ii.c) Sawmill Area (W) (SA)
417-419, 421

(ii.d) Riley Ridge Unit (AQ) (RRU)
405, 415-417, 420, 422-424

(ii.e) Lake Ridge Unit (EX) (LRU)
371, 372, 425

(ii.f) Tip Top Unit (M) (TTU)
305, 306, 308, 312-335, 338-340, 342, 347-353, 357, 359-361, 365, 381-383, 386-388, 390-397, 402-404, 408-414 [310, 336, and 337 are within road right-of-way connecting unit to Big Mesa Plant Site (E)]

(ii.g) Fogarty Creek Unit (EX) (FCU)
353-359, 362-370

(ii.h) Graphite Unit (EX) (GU)
282, 372

(ii.i) Dry Piney Unit (EX) (GU)
278-283

(ii.j) Hogsback Unit (M) (HU)
217, 257, 269, 273, 277, 283, 284 (274 is within road rights-of-way associated with unit, but outside unit boundaries)

Non-Linear Facilities

(ii.k) Buckhorn (AQ) (BH)
No projects recorded

(ii.l) West Dry Basin (EX) (WDB)
399

TABLE 1-II (Continued)

(ii.m) East Dry Basin (EX) (EDB-EX)
300

(ii.n) Craven Creek (NWP) (CC)
143

(ii.o) Sulfur loadout (SL)
104

Linear Facilities

(ii.p) Railroad spur to Craven Creek site (NWP) (RR-CC)
104-109, 143

(ii.q) Transmission line from NPP to Buckhorn (AQ+EX) (TL-1, TL-BH)
3, 36, 64, 66, 106, 111, 140, 159, 161-163, 167, 177, 181, 199-202, 208, 210, 211, 213, 235-237, 239, 241-246, 248-251, 285, 286, 288-292, 295

(ii.r) Transmission line branch to West Dry Basin (EX) (TL-2, TL-WDB)
311, 341, 344, 345, 400

(ii.s) Transmission line branch to East Dry Basin (EX) (TL-EDB)
No projects recorded

(ii.t) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)
104, 105

(ii.u) Transmission line from NPP TO Craven Creek site (NWP) (TL-N-CC)
3, 36, 63, 65-68, 71, 104, 105, 107, 143

(ii.v) Sour gas trunkline to Buckhorn (AQ) (SG-BH-Q)
285, 286, 288-292, 294, 297, 298, 300, 377-379, 401, 407

(ii.w) Sour gas trunkline to Buckhorn (W) (SG-BHW)
285, 286, 288-292, 294, 297, 298, 300, 377-379, 401, 407

TABLE 1-II (Continued)

(ii.x) Sour gas trunkline to West Dry Basin (EX) - within well field (SG-WDB)
348, 360, 363, 390, 399

(ii.y) Sour gas trunkline to East Dry Basin (EX) (SG-EDB-E)
311, 341, 344-346, 377, 400, 406

(ii.z) Sour gas trunkline to Craven Creek (NWP) (SG-CC)
105, 140, 143, 160, 161, 165, 166, 177, 178, 181, 182, 184, 205-210, 212-214. 216, 222, 223, 259-262, 264, 265, 267, 269-272, 274, 313, 315, 316, 321, 322, 329, 333-335, 338, 347

(ii.aa) Sales gas pipeline from Craven Creek site (NWP) (S-CC)
105, 143

(ii.bb) Combined carbon dioxide and sales gas corridor from West Dry Basin (EX) to Trailblazer (CS-WDB, CS-1, CS-2, CS-3)
1-6, 10-15, 37-39, 72, 74, 119-123, 148, 170-176, 189-197, 227, 230-234, 287, 291, 293, 295-299, 311, 341, 344-346, 377, 400

(ii.cc) Carbon dioxide and sales gas branch from Buckhorn (AQ) (CS-BH)
228, 229

(ii.dd) Carbon dioxide and sales gas branch from East Dry Basin (EX) (CS-EDB)
No projects recorded

(ii.ee) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)
7-9, 16, 17, 19, 21-28, 30-34, 43-47, 49-55, 57, 58, 60, 62, 94-101, 142, 143

(ii.ff) Sulfur pipeline from East Dry Basin (EX) to loadout (SP-1, SP-2, SP-EDB)
104, 105, 140, 160, 165, 166, 177-180, 182-184, 205-208, 210-213, 215, 222-224, 255, 256, 260-262, 264, 265, 267, 269-272, 274, 311-318, 322, 325, 329, 331, 333, 335, 339, 347

(ii.gg) Sulfur pipeline from Buckhorn (AQ) (SP-BH)
104, 105, 140, 160, 165, 166, 177-180, 182-184, 205-208, 210-213, 215, 222, 223, 235-237, 239, 243, 245, 246, 248, 249, 253, 254, 275, 276, 285, 286, 288-292, 294, 297

(ii.hh) Water pipeline from Green River to Craven Creek (NWP) (W-CC)
131, 136, 137, 143, 149-158

(ii.ii) Access road to Craven Creek (NWP) (A-CC)
105, 143

SHUTE CREEK ALTERNATIVE

Well Field Units

(ii.a) Darby Mt. Unit (AQ) (DMU)
425

(ii.b) North Riley Ridge Unit (AQ) (NRRU)
434, 435

(ii.c) Sawmill Area (W) (SA)
417-419, 421

(ii.d) Riley Ridge Unit (AQ) (RRU)
405, 415-417, 420, 422-424

(ii.e) Lake Ridge Unit (EX) (LRU)
371, 372, 425

(ii.f) Tip Top Unit (M) (TTU)
305, 306, 308, 312-335, 338-340, 342, 347-353, 357, 359-361, 365, 381-383, 386-388, 390-397, 402-404, 408-414 [310, 336, and 337 are within road right-of-way connecting unit to Big Mesa Plant Site (E)]

(ii.g) Fogarty Creek Unit (EX) (FCU)
353-359, 362-370

(ii.h) Graphite Unit (EX) (GU)
282, 372

(ii.i) Dry Piney Unit (EX) (GU)
278-283

TABLE 1-II (Continued)

(ii.j) Hogsback Unit (M) (HU)
217, 257, 269, 273, 277, 283, 284 (274 is within road rights-of-way associated with unit, but outside unit boundaries)

Non-Linear Facilities

(ii.k) Buckhorn (AQ) (BH)
No projects recorded

(ii.l) Craven Creek (NWP) (CC)
143

(ii.m) Shute Creek (EX) (SC)
138

(ii.n) Sulfur loadout facility
104

Linear facilities

(ii.o) Railroad spur to Craven Creek site (NWP) (RR-CC)
104-109, 143

(ii.p) Transmission line from NPP to Buckhorn (AQ+EX) (TL-1, TL-BH)
3, 36, 64, 66, 106, 111, 140, 159, 161-163, 167, 177, 181, 199-202, 208, 210, 211, 213, 235-237, 239, 241-246, 248-251, 285, 286, 288-292, 295

(ii.q) Transmission line branch to Shute Creek (EX) (TL-SC) (taken from 7.5' series)
105, 138, 142, 143

(ii.r) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)
104, 105

(ii.s) Transmission line from NPP to Craven Creek (NWP) (TL-N-CC)
3, 36, 63, 65-68, 71, 104, 105, 107, 143

TABLE 1-II (Continued)

(ii.t) Sour gas trunkline to Buckhorn (AQ) (SG-BH)
285, 286, 288-292, 294, 297, 298, 300, 377-379, 401, 407

(ii.u) Sour gas trunkline to Buckhorn (W) (SG-BHW)
285, 286, 288-292, 294, 297, 298, 300, 377-379, 401, 407

(ii.v) Sour gas trunkline to Shute Creek (EX) (SG-SC)
131, 134, 136, 139, 141, 160

(ii.w) Sour gas trunkline to Craven Creek (NWP) (SG-CC)
105, 140, 143, 160, 161, 165, 166, 177, 178, 181, 182, 184, 205-210, 212-214, 216, 222, 223, 259-262, 264, 265, 267, 269-272, 274, 313, 315, 316, 321, 322, 329, 333-335, 338, 347

(ii.x) Sales gas pipeline from Craven Creek site (NWP) (S-CC)
105, 143

(ii.y) Combined carbon dioxide and sales gas corridor from Buckhorn (AQ) to Trailblazer (CS-BH, CS-2, CS-3)
1-6, 10-15, 38, 39, 72, 74, 118-123, 148, 228, 229

(ii.z) Carbon dioxide and sales gas branch from Shute Creek (EX) (CS-SC)
1-6, 10, 11, 14, 15, 29, 37, 40, 72, 73, 75-78, 80, 128-130

(ii.aa) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)
7-9, 16, 17, 19, 21-28, 30-34, 43-47, 49-55, 57, 58, 60, 62, 94-101, 142, 143

(ii.bb) Sulfur pipeline from Buckhorn to loadout (AQ) (SP-1, SP-2, SP-BH)
104, 105, 140, 160, 165, 166, 177-180, 182-184, 205-208, 210-213, 215, 222, 223, 235-237, 239, 243, 245, 246, 248, 249, 253, 254, 275, 276, 285, 286, 288-292, 294, 297

(ii.cc) Sulfur pipeline branch to Shute Creek (EX) (SP-SC)
138, 142, 143

(ii.dd) Water pipeline from Green River to Craven Creek (NWP)
131, 136, 137, 143, 149-158

TABLE 1-II (Continued)

(ii.ee) Access road to Craven Creek (NWP) (A-CC)
105, 143

(ii.ff) Access road to Shute Creek (EX) (A-SC-W)
138

(ii.gg) Access road to Shute Creek (EX) (A-SC-S)
81-83, 85, 86, 89-92, 129

(ii.hh) Access road to Shute Creek (EX) (A-SC-N)
132, 134, 135, 157, 158

NORTHERN ALTERNATIVE

Well Field Units

(ii.a) Darby Mt. Unit (AQ) (DMU)
425

(ii.b) North Riley Ridge Unit (AQ) (NRRU)
434, 435

(ii.c) Sawmill Area (W) (SA)
417-419, 421

(ii.d) Riley Ridge Unit (AQ) (RRU)
405, 415-417, 420, 422-424

(ii.e) Lake Ridge Unit (EX) (LRU)
371, 372, 425

(ii.f) Tip Top Unit (M) (TTU)
305, 306, 308, 312-335, 338-340, 342, 347-353, 357, 359-361, 365, 381-383, 386-388, 390-397, 402-404, 408-414 [310, 336, and 337 are within road right-of-way connecting unit to Big Mesa Plant Site (E)]

TABLE 1-II (Continued)

(ii.g) Fogarty Creek Unit (EX) (FCU)
353-359, 362-370

(ii.h) Graphite Unit (EX) (GU)
282, 372

(ii.i) Dry Piney Unit (EX) (GU)
278-283

(ii.j) Hogsback Unit (M) (HU)
217, 257, 269, 273, 277, 283, 284 (274 is within road rights-of-way associated with unit, but outside unit boundaries)

Non-linear facilities

(ii.k) West Dry Basin (EX) (WDB)
399

(ii.l) Buckhorn (AQ) (BH)
No projects recorded

(ii.m) Big Mesa (EX) (BM)
347

(ii.n) East Dry Basin (NWP) (EDB-N)
300

(ii.o) Sulfur loadout (SL)
104

Linear Facilities

(ii.p) Transmission line from NPP to West Dry Basin (EX) (TL-1, TL-2, TL-WDB)
3, 36, 64, 66, 106, 111, 140, 159, 161-163, 167, 177, 181, 199-202, 208, 210, 211, 213, 235-237, 239, 241-246, 248-251, 311, 341, 344-346, 377, 400

TABLE 1-II (Continued)

(ii.q) Transmission line branch to Buckhorn (AQ) (TL-BH)
285, 286, 288-292, 295, 297

(ii.r) Transmission line branch to Big Mesa (EX) (TL-BM)
240, 241, 247-249, 258

(ii.s) Transmission line branch to East Dry Basin (NWP) (TL-EDB)
No projects recorded

(ii.t) Transmission line branch to sulfur loadout (AQ, EX, NWP) (TL-SL)
104, 105

(ii.u) Sour gas trunkline to West Dry Basin (EX) (SG-WDB)
348, 360, 363, 390

(ii.v) Sour gas trunkline to Buckhorn (AQ) (SG-BH-Q)
285, 286, 288-292, 294, 297, 298, 300, 377-379, 401, 407

(ii.w) Sour gas trunkline to Buckhorn (W) (SG-BH-W)
285, 286, 288-292, 294, 297, 298, 300, 377-379, 401, 407

(ii.x) Sour gas trunkline to Big Mesa (EX) (SG-BM) (taken from 7.5' series)
270, 333, 347-352, 361, 365

(ii.y) Sour gas trunkline to East Dry Basin (NWP) (SG-EDB-N)
311, 341, 344-346, 377, 400, 406

(ii.z) Sales gas and carbon dioxide pipeline from West Dry Basin to Trailblazer (EX) (CS-WDB, CS-1, CS-2, CS-3)
1-6, 10-15, 37-39, 72, 74, 119-123, 148, 170-176, 189-197, 227, 230-234, 287, 291, 293, 295-299, 311, 341, 344-346, 377, 400

(ii.aa) Sales gas and carbon dioxide pipeline branch from Buckhorn (AQ) (CS-BH)
228, 229

(ii.bb) Sales gas and carbon dioxide pipeline branch from Big Mesa (EX) (CS-BM)
296, 299, 301-304, 307-309, 343

(ii.cc) Carbon dioxide (only) branch from East Dry Basin (NWP) (CS-EDB)
No projects recorded (not mapped -- follows Exxon's corridor)

(ii.dd) Sales gas pipeline from East Dry Basin (NWP) (S-EDB)
205, 206, 208, 209, 212-216, 259-262, 264, 265, 267-272, 274, 311, 313-316, 322, 325, 329, 331, 333-335, 339, 341, 344-347, 377, 400

(ii.ee) Sulfur pipeline from West Dry Basin to loadout (EX+AQ) (SP-1, SP-WDB)
104, 105, 140, 160, 165, 166, 177-180, 182-184, 205-208, 210-213, 215, 222-224, 255, 256, 260-262, 264, 265, 267, 269-272, 274, 312-318, 322, 325, 329, 331, 333, 335, 339, 347

(ii.ff) Sulfur pipeline branch from Buckhorn (AQ) (SP-BH)
104, 105, 140, 160, 165, 166, 177-180, 182-184, 205-208, 210-213, 215, 222, 223, 235-237, 239, 243, 245, 246, 248, 249, 253, 254, 275, 276, 285, 286, 288-292, 294, 297

(ii.gg) Sulfur pipeline branch from Big Mesa (EX) (SP-BM)
No projects recorded

(ii.hh) Sulfur pipeline branch from East Dry Basin (NWP) (SP-EDB-WDB)
311, 341, 344-346, 377, 400

KEY
TABLE 1-III

KNOWN PREHISTORIC AND HISTORIC SITES WITHIN THE RILEY RIDGE EIS AREA

Features

H	Hearth
SC	Stone circle
FR	Fire-cracked rock
SA	Stone alignment
C	Cairn
S	Structure

Age

U(P)	Unknown, prehistoric
U(H)	Unknown, historic
PI	Paleo-Indian
EA	Early Archaic
MA	Middle Archaic
LA	Late Archaic
LP	Late Prehistoric

Artifacts

Prehistoric

L	Lithics	h	Hammerstone
p	Point	ch	Chopper
s	Scraper	bl	Blade
b	Biface	GS	Ground stone
c	Core	C	Ceramics
r	Retouched flake	B	Bone
k	Knife	CH	Charcoal
u	Utilized flake	S	Shell
d	Debitage	BD	Bead
Tool	Unspecified tool		

Historic

W	Wood
G	Glass
M	Metal

Recorder

AERC	Archaeological Environmental Research Corp.
AR	Archaeological Rescue
AS	Archeological Services
BLM	Bureau of Land Management
CA	Commonwealth Associates Inc.
GK	Gordon & Kranzush
HPC	High Plains Consultants
IS	Idaho State University
LOPA	Laboratory of Public Archaeology
MZ	Metcalf-Zier Archaeologists, Inc.
NTP	National Trails Project
PEC	Powers Elevation
PMZ	Pioneer-Metcalf-Zier
SA	Science Applications, Inc.
USBR	US Bureau of Reclamation
USFS	US Forest Service
UU	University of Utah
UW	University of Wyoming
WWC	Western Wyoming College

National Register

NR	On Register
DE	Determined eligible
PE	Potentially eligible
NE	Not eligible
NI	No information

TABLE 1-III

KNOWN PREHISTORIC AND HISTORIC SITES WITHIN THE RILEY RIDGE EIS AREA
(*Exact location not available; not plotted on topographic maps)
(See Table 3-I for archaeological project description. Blank in column indicates no known affiliation)

Lincoln County

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN21	21 NW SW	116	20	Kemmerer	S (multi-roomed, still)?	G	H (Prohibition era)	WWS	1975	Photograph, stabilize ?	NI	69
LN31	21 SE SE SW	116	17	Kemmerer	H?	L(d,b)	U(P)	UW	1975	No further work	NI	112
LN33	26 NE SW NW	113	24	Names Hill	FR	L(p,d)	U(P)	WWC	1973	No further work	NI	208
LN34	22 N NE	113	26	Cow Hollow Creek	FR	L(b,d)	U(P)	WWC	1976	None given	NI	---
LN36	25 NW NE SE NW	113	13	Fort Hill	FR	L(p,d)	U(P)	WWC	1977	No further work	NI	182, 184
LN47	22 S SE NE	113	2	Shute Creek Lake	FR	L(c,d, tools)	U(P)	UW	1978	Monitor	NI	139
LN48	22 NE NE NW SW SE SE SW NW	113	1	Shute Creek Lake		L(c,h,d)	U(P)	UW GK	1978 1979	Monitor No further work	NI NE	141
LN82	19 NW NW NW	112	3	Moxa	FR	L(d)	U(P)	AS	1978	Test; (pipeline possibly rerouted)	NI	35

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN86*	20 NE SW	112	7	Moxa	H,FR	L(d,s)	U(P)	AS	1978	Avoid or test	NI	---
LN97	21 SW SE SE NW NE NE	112	1, 12 1 12	Fontenelle SE		L(d,c)	U(P)	WWC	1979	No further work	NI	88
LN103*	21 SW NE SE	116	8	Kemmerer	H	L(d)	U(P)	WWC	1976	No further work	NI	114
LN111	26 NW NE NE	113	11	La Barge	FR	L(b,ch,d)	U(P)	WWC	1979	No further work	NE	---
LN127	21 NW NE SE SW	112	29	Cow Hollow Creek	H,FR	L(d,p,k,s, c,ch,r,u, tool), GS, B	LP (670 AD) MA (1505 BC, 1405 BC; C-14 dates)	WWC	1979 (survey)	Partially excavated 1980; site should be avoided or further excavated	PE	48
LN128	21 NE NE NE NW	112	32	Cow Hollow Creek		L(d,b)	U(P)	WWC	1979	No further work	NE	48
LN133	20 SE SW SW NW SE SW	112	34	Moxa	FR	L(p,d), GS	U(P)	WWC	1978	Reroute line	NI	45
LN134	20 SE SE SW	116	6	Elkol		L(d)	U(P)	WWC	1979	No further work	NE	65
LN140*	22 SW NE	112	4	Fontenelle	H,FR		U(P)	AS	1979	Avoid (road rerouted)	PE	137
LN144	21 NE NE SE NW	112	32	Cow Hollow Creek		L(d,p,b)	U(P)	WWC	1979	No further work	NI	96

TABLE 1-III (Continued)

Site No.	Location				Cultural Characteristics							
(48)	TN	RW	Sec.	USGS Quad	Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN146	22	111	13, 18, 19	Fontenelle SE	FR	L(b,d)	U(P)	WWC	1979	Monitored (1979); map & monitor full length of pipeline, use just trenching machine (WCRM 1980)	NE	127,130
LN150	21	111	6 SE NE NW SW	Fontenelle SE	FR		U(P)	WWC	1979	No further work	NE	---
LN155	21	112	32 S NE	Cow Hollow Creek		L(d,c)	U(P)	AS	1979	No further work	NE	97
LN182	20	112	16 NE NE SW	Moxa	FR	L(d)	U(P)	AS	1979	No further work	NI	61
LN183	20	112	16 W NE SW	Moxa	FR	L(d)	U(P)	AS	1979	Avoid or monitor; shovel tested	NI	61
LN188	20	112	21 NE NE SW	Moxa	FR	L(d); GS	U(P)	AS	1979	Avoid	NE	58
LN189	20	112	21 SE SE NW	Moxa	FR	L(d),GS	U(P)	AS	1979	Avoid; reroute line	NE	58
LN190	20	112	21 SW NW NE	Moxa	FR	L(d),GS	U(P)	AS	1979	Avoid; reroute line	NE	58
LN200	20	112	9 SE SW SW	Moxa	FR,H	L(d,c,b,u, ch),GS;G,M, W	U(P,H)	AS	1979, 1981	Avoid or test. ROW rerouted in 1979 and rerouted again in 1981	NE (1979) and NI (1981)	46
LN201	21	112	33 W NW SW	Cow Hollow Creek		L(d)	U(P)	AS	1979	No further work	NI	97
LN203	22	113	1 SE SE NW NW SW SW NE NW	Shute Creek Lake		L(p,b,c,d)	U(P)	GK	1979	No further work	NE	141

TABLE 1-III (Continued)

Site No.	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's	Nat.	Project
(48)	TN	RW	Sec.		Feat.	Artif.	Age			Recommendation	Reg.	Affiliation
LN204	22 N NE NW	113	1	Shute Creek Lake	FR	L(p,b,s,d), GS,C	1150 AD (LP)	GK	1979	Monitored (1980)	NI	141
LN219	21	116	21	Kemmerer	Kemmerer Coal Fields		H				NI	---
LN226	24	114	26	Fort Hill	Pine Grove Sublette Trail Campsite		H				NI	---
LN231	21 SE NE SW SE	114	22	Opal	H	L(d,b,c,r); M,G,B,ceramics	U(P,H)	UW	1979	No further work	NE	105
LN232	21 NE NW SW	114	14	Opal	H	L(b,r,d),C	U(P) 1900- 1950 AD(H)	UW	1979	Tested 6/80	NE	105
LN233	21 W NW SE	114	11	Opal	FR	L(p,b,r,c, d),GS,C	LP(P) U(H)	UW	1979	Test if further work proposed	PE	105
LN234	21 NW NW NE NE	114	11	Opal		L(r,c,d)	U(P)	UW	1979	No further work	NE	105
LN235	22 C NW SW SW	113	30	Opal		L(r,d)	U(P)	UW	1979	No further work	NE	105
LN236	22 SW NW NW NE	113	30	Opal		L(c,r,d)	U(P)	UW	1979	No further work	NE	105
LN241	23 C NE SW SW	113	32	Graham Reservoir		L(c,r,d)	U(P)	UW	1979	No further work	NE	105
LN242	23 SW NW NW SW	113	32	Graham Reservoir	H		U(P)	UW	1979	No further work	NE	105
LN286	20 S NW SW	112	8	Moxa		L(d) (source area)	U(P)	AS	1979	No further work	NE	53

TABLE 1-III (Continued)

Site No. (48)	Location TN	RW	Sec.	USGS Quad	Cultural Characteristics Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN300	25 N 1/2 N 1/2, SE SE SE	113	25	Names Hill, Fontenelle SW	Immigrant inscriptions along main trail of Sublette cutoff, camp, graves		from 1845 A.D.	BLM	1982	Avoid	DE	---
LN323	21 22 SW & NW & E/2 NE	114 114	2, 1 36	Opal	FR	L(p,b,r,s, d)	LA,LP	UW	1979	Test ROW; tested 6/80	PE	105
LN324	23 N SE	113	14	Shute Creek Lake		L	U(P)	IS	1974	None given	NI	---
LN325*	21	114	13	Opal	FR	L(d)	U(P)	UW	1972	None given	NI	110
LN332	21 SE 1/4	116	4	Kemmerer		L(p,d)	U(P)	WWS	1974	"Excavation not urgently recommended"	NI	116
LN333	22 N NE SE	116	14	Kemmerer	Quarry	L("tools present")	LA, LP	WWC	1981	Test	NI	147
LN335*	21 N/2 NE	114	2	Opal		L(s,r,ch,d)	U(P)	UW	1972	None given	NI	110
LN336	23 NE NE	112	24	Fontenelle	H,FR	L(p,d, tools)	U(P)	WWC	1973	Monitor	NI	158
LN337	23 NW NW NW	111	19	Fontenelle	FR	L(d,c)	U(P)	WWC	1973	NI	NI	149
LN353	25 SE NE SE	113	12	Fort Hill		L(d,tool)	U(P)	WWC	1975	None given	NI	---
LN354	25 C N SW NW	113	13	Fort Hill	FR	L(p,d),B	MA	WWC	1976	Tested (1976)	NE	180

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN355	25 NE SW NE NE	113	13	Fort Hill	FR	L(d),B	U(P)	WWC	1976	Tested (1976)	NE	180
LN356	25 NE NE NE	113	13	Fort Hill		L(c,s,d)	U(P)	WWC	1976	Tested (1976)	NE	180
LN357	25 SE SE SE	113	12	Fort Hill		L(c,r,d)	U(P)	WWC	1976	Tested (1976)	NE	180
LN360*	24 NE NE NW	113	26	Fontenelle Res. SW	FR	L(d)	U(P)	UW	1977	No further work	NE	165
LN372*	22 23	112 112	2 NW 35 SW	Fontenelle		L(d),GS	U(P)	UW	1977	No further work	NI	---
LN373*	22 SE SW NE	112	14	Fontenelle	FR	L(d,tools), GS	U(P)	UW	1977	Monitor any further impact	NI	93
LN374*	22 SW SE SW	112	24	Fontenelle SE	FR	L(d)	U(P)	UW	1977	Monitor road construction	NI	93
LN375*	22 NE SW	111	19	Fontenelle SE	H	L(d)	U(P)	UW	1977	Monitor	NI	93
LN376*	22 NE NE NE NE	112	26	Fontenelle	FR	L(c,p,d)	U(P)	UW	1977	Monitor if road to be widened	NI	93
LN377*	22 C of section line	112	26, 25	Fontenelle	FR	L(d)	U(P)	UW	1977	Monitor if road to be widened	NI	93
LN378*	22 (25) NW SW SW (26) SE NE SE	112	25, 26	Fontenelle SE		L(d)	U(P)	UW	1977	No further work	NI	93
LN379*	22	112	26, 25, 35, 36	Fontenelle SE		L(p,d),GS	U(P)	UW	1977	Monitor if road to be widened at corner	NI	93

TABLE 1-III (Continued)

Site No. (48)	Location TN	RW	Sec.	USGS Quad	Cultural Characteristics Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN380	22 NW SW SE	112	36	Fontenelle SE	H,FR	L(c,d, tools),GS	U(P)	UW	1977	Test	NI	90?
LN387	21 NW SE SW	111	7	Fontenelle SE	H,FR	L(d,c)	U(P)	UW	1977	Monitor if road is widened	NI	90?
LN414	21 NW NW SE	116	34	Kemmerer		L(b,c,d)	U(P)	WWC	1979	No further work	NE	3
LN428	22 NE NW, NW NW	112	7	Shute Creek Lake	FR,H	L(d[500+])	U(P)	AR	1981	Monitor construction, test dunal areas before future impact	PE	---
LN441	21 NE SW	112	28	Cow Hollow Creek		L(d,c,h)	U(P)	WWC	1978	No further work	NI	---
LN472	20 E NW SE	112	8	Moxa		L(d) (quarry and source area)	U(P)	AS	1980	No further work	NE	54
LN477	20 NE NW SW NE	112	21	Moxa	H,FR		U(P)	WWC	1980	Evaluative testing (no further work for present project)	NI	59
LN480	23 SW NW & SE NE	114	1, 2	Fort Hill	FR	L(d)	U(P)	WWC	1980	Avoid until further evaluation	NI	162,163
					FR	L(p,b,s,d)	U(P)	AS	No date	Collect	NI	
LN490	23 NW NW NW	114	1	Fort Hill	FR	L(p,b,s,c, d),B	U(P)	AS	1980	No further work for present project; test & map before future impact	NI	163

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN491	23	114	1	Fort Hill	FR	B,L(p,d,c)	U(P)	AS	1980	Collect, test	NI	163
	NE NW NW &											
	24	114	36		H,FR	L(h,s,b,d)	U(P)	AR	1981	No further work	PE	
	SE SE SW											
LN492	23	114	1	Fort Hill	FR	L(p,b,d)	U(P)	AS	No date	Collect & test	NI	163
	NW & NE NE NW											
	24	114	36		FR		U(P)	AR	1981	Avoid or test	PE	
	SW SE SW											
LN501	22	112	6	Shute Creek Lake		L(d)	U(P)	AS	1980	No further work	NE	131
	SW NE SW											
LN502	22	112	6	Shute Creek Lake		L(d)	U(P)	AS	1980	No immediate further work; map, monitor future work	NE	131
	NW NE SW											
LN503	22	112	6	Shute Creek Lake		L(d)	U(P)	AS	1980	No further work	NE	131
	NW NE SW											
LN504	22	112	6	Shute Creek Lake		L(d)	U(P)	AS	1980	No further work	NE	131
	SE SW NW											
LN505	22	112	6	Shute Creek Lake		L(d)	U(P)	AS	1980	No further work	NE	131
	SE NW NW											
LN506	22	112	6	Shute Creek Lake		L(d)	U(P)	AS	1980	No further work	NI	131
	SW NW NW											
LN507	23	112	31, 6	Shute Creek Lake	FR	L(p,d)	EA	AS	1980	Avoid (access re-routed)	PE	131
	SW & N NW NW											
LN515	21	112	1	Fontenelle SE		L(d)	U(P)	AS	1980	No further work	NI	83
	SE NW SW											
LN516	21	112	1	Fontenelle SE		L(c,h,d)	U(P)	AS	1980	No further work	NE	83
	NW SE											

TABLE 1-III (Continued)

Site No. (48)	Location TN	RW	Sec.	USGS Quad	Cultural Characteristics Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN517	21	112	1, 6 (1) NE SE NE SE (6) SW NW NW SW	Fontenelle SE		L(d)	U(P)	AS	1980	No further work	NE	83
LN528	21	114	33 NE NE SW	Opal	FR	L(p,s,b,d)	U(P)	LOPA	1980	Avoid	PE	8
LN549	22	116	28 SW SE NE NE	Kemmerer	FR	L(d,c)	U(P)	LT	1980	No further work	NE	117
LN550	22	116	28 NW SW NE NE	Kemmerer		W,M	U(H)	LT	1980	No further work	NE	117
LN551	22	116	27 SW NW SW SW	Kemmerer	S	W, brick,G, ceramics, M	ca 1920 A.D.	LT	1980	No further work	NE	117
LN552	22	116	33 NE NE SE SE	Kemmerer		L(d,c)	U(P)	LT	1980	No further work	NE	117
LN553	22	116	28 SW NW SE SE	Kemmerer		M,B,G, coal dump	U(H)	LT	1980	No further work	NE	117
LN554	22	116	33 NE NE NW NE	Kemmerer		L(c)	U(P)	LT	1980	No further work	NE	117
LN555	22	116	33 NE SE NW NE	Kemmerer		L(d,c)	U(P)	LT	1980	No further work	NE	117
LN556	22	116	33 SW NW SE NE	Kemmerer		W,M, paper trash	U(H)	LT	1980	No further work	NE	117
LN557	22	116	33 SE SE NW SE	Kemmerer		W,M	U(H)	LT	1980	No further work	NE	117
LN558	22	116	28 SW SE SW SE	Kemmerer	Quarry	L(d,c,u)	U(P)	LT	1980	No further work	NE	117

TABLE 1-III (Continued)

Site No. (48)	Location TN	RW	Sec.	USGS Quad	Cultural Characteristics Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN559	22 NE NW SE	116	28	Kemmerer	H	M,G,hay, B, rubber	U(H)	LT	1980	No further work	NE	117
LN560	22 SE NE SW NE	116	28	Kemmerer		W,M	U(H)	LT	1980	No further work	NE	117
LN561	22 SW SE SE SE	116	33	Kemmerer		W,G,M (sheepherder camp & recent dump	U(H)	LT	1980	No further work	NE	117
LN566	21 SW SE NW NE	116	4	Kemmerer		W,M	U(H)	LT	1980	No further work	NE	117
LN567	21 SE NE NE NE NE NW	116	16	Kemmerer	Moyer Junction R.R. Station		H	LT	1980	None given	NE	117
LN568	21 NW SE SW SW SE SW	116	9	Kemmerer		W,M,G	U(H)	LT	1980	No further work	NE	117
LN569	21 NW SE SW	116	9	Kemmerer		W,G,M	U(H)	LT	1980	No further work	NE	117
LN570	21 SW NE NE SW	116	9	Kemmerer		W,G,M	U(H)	LT	1980	None	NE	117
LN571	21 SW SE SE NW	116	9	Kemmerer		W,G,M	U(H)	LT	1980	None	NE	117
LN572	21 SE SE SW NW	116	9	Kemmerer		L(d,u); M,G	U(P) H(1950 on)	LT	1980	None	NE	117
LN573	21 SE SW NW SW	116	9	Kemmerer	FR	L(p,d,b) GS	LP	LT	1980	Tested (1980); Avoid	PE	117

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN574	21 SE NE NW NW	116	9	Kemmerer		W,G,M	1940-1960 A.D.	LT	1980	No further work	NE	117
LN575	21 NW NW NW NE	116	4	Kemmerer		W,G,M	ca.1950 A.D.	LT	1980	No further work	NE	117
LN576	21 NE NE NE SW	116	4	Kemmerer		W,G,M	U(H)	LT	1980	No further work	NE	117
LN577	21 NW NW NW NW	116	9	Kemmerer		L(d,c,b)	U(P)	LT	1980	No further work	NE	117
LN578	21 NE SE SE NE	116	8	Kemmerer		G,M	1950 A.D.	LT	1980	No further work	NE	117
LN579	21 C NE SE	116	8	Kemmerer	FR	L(d,k); G, historic crockery, M	LA; U(H)	LT	1980	Test	NE	117
LN580	21 NW NE NE NE	116	8	Kemmerer		W,M	1960-1970 A.D.	LT	1980	No further work	NE	117
LN581	21 SE SE NW NE	116	8	Kemmerer		L(d)	U(P)	LT	1980	No further work	NE	117
LN582	21 SW NW NE SE	116	8	Kemmerer		L(d,b,u)	U(P)	LT	1980	No further work	NE	117
LN584	21 SE NW SE NE	116	8	Kemmerer		L(d); W,G,M	U(P); 1950-1960 A.D.	LT	1980	No further work	NE	117
LN619	22 NE NW NW SW	112	12	Fontenelle		L(c,d)	U(P)	PEC	1980	Avoid	NE	132
LN620	22 NW NW NW SW	112	12	Fontenelle		L(c,d)	U(P)	PEC	1980	Avoid	NE	132

TABLE 1-III (Continued)

Site No.	Location				Cultural Characteristics					Recorder's	Nat.	Project
(48)	TN	RW	Sec.	USGS Quad	Feat.	Artif.	Age	Recorder	Year	Recommendation	Reg.	Affiliation
LN621	22 S SE NE	112	11	Fontenelle	H,FR	L(s,ch,u, d);M,cut bone	U(P); U(H)	PEC	1980	Avoid, test	PE	132
LN627	20 SW NE NW NE	115	14	Roberson Creek		L(d,r,s)	U(P)	MZ	1980	Monitor construction; no further work	NI	8
LN628	21 SE SE SE SW 21 NE NE NE NE 28	114	21,28	Opal	H	L(d,c,p,b)	U(P)	MZ	1980	Monitor during construction	NE	8
LN629	21 SW SE NE NE	114	28	Opal		L(d)	U(P)	MZ	1980	Monitor	NE	8
LN658	24 NW NE SW SW	114	36	Fort Hill	H,FR	L(d)	U(P)	AR	1981	No further work	NE	167
LN660	21 NE SE NE	114	28	Opal		L(d,u)	U(P)	MZ	1980	Map, collect, test	PE	8
LN664	23 NW NE NE	113	5	Fort Hill		L(c,d)	U(P)	AR	1981	No further work	NE	161
LN665	23 NW NW NE	113	5	Fort Hill		L(d)	U(P)	AR	1981	No further work	NE	161
LN671	23 NW NE SW SE	112	24	Fontenelle		L(d)	U(P)	UW	1981	No further work	NE	154
LN672	23 NW SE, NE SE	112	24	Fontenelle	FR; grave?	L(d,c,r,b, s),GS;M,W,B	U(P); 1940s to present	UW	1981	Monitor, avoid or test	NI	154
LN674	22 NW NE SW	112	7	Shute Creek Lake	FR	L(d,b,c),GS	U(P)	PEC	1981	Avoid	NI	136
LN675	22 SE NW SE NW	112	7	Shute Creek Lake		L(d,b)	U(P)	PEC	1981	Avoid, no further work	NE	136

TABLE 1-III (Continued)

Site No. (48)	Location TN	 RW	 Sec.	USGS Quad	Cultural Characteristics Feat.	 Artif.	 Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN676	22 NW SW NW	112	7	Shute Creek Lake	FR	L(d,p,k)	U(P)	PEC	1981	Avoid or test; reroute marked	NI	136
LN681	21 S NE SW	111	18	Fontenelle SE		L(r,d)	U(P)	PEC	1981	No further work	NE	86
LN682	21 NE NW SE SW	111	18	Fontenelle SE		L(r,d)	U(P)	PEC	1981	Avoid	NI	86
LN683	21 NE SE SW	111	18	Fontenelle SE		L(r,d)	U(P)	PEC	1981	Avoid	NI	86
LN684	23 SW NW SW SE NW SW SW SE	113	8	Graham Reservoir	FR	L(d)	U(P)	WWC	1981	No further work, site tested	NE	160
LN727	21 N NE SW	112	34	Fontenelle SE	FR	L(d,c)	U(P)	WWC	1981	Relocate well pad	NE	101
LN735	20 C SE, W NE NE	116	6,7	Elkol	H,FR	L(c,d, p,b)	LA	UW	1982	Map prior to future impact	NE	67
LN736	21 SE NW SE	116	34	Kemmerer		W,G,M, ceramics	Post 1920 A.D.	UW	1982	No further work	NE	67
LN737	21 NE NE NW SE	116	34	Kemmerer	H,FR	L(d,tools), GS; G,M	U(P); recent (H)	UW	1982	No further work	NE	67
LN738	21 C SE NE	116	34	Kemmerer		L(d,ch)	U(P)	UW	1982	No further work	NE	67
LN739	21 SE SE SE SW SW SE	116	34	Kemmerer Elkol	H,FR	L(d)	U(P)	UW	1982	Avoid, map prior to future impact	NE	67
LN743	21 NW NW SE NE	114	16	Opal		L(p,d)	U(P)	WWC	1981	None given	NE	106

TABLE 1-III (Continued)

Site No. (48)	Location TN	Location RW	Location Sec.	USGS Quad	Cultural Characteristics Feat.	Cultural Characteristics Artif.	Cultural Characteristics Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN749	23 SW SW SE	112	32	Shute Creek Lake	FR,H	L(d,c)	U(P)	AR	1981	No further work	NE	157
LN750	23 SE SE SW	112	33	Shute Creek Lake, Fontenelle	FR	L(d)	U(P)	AR	1981	No further work	NE	157
LN751	23 SW SW & SE SW	112	35	Fontenelle	H,FR	L(c,d)	U(P)	AR	1981	No further work	NE	157
LN752	23 S SW SE	112	35	Fontenelle	FR	L(s,d)	1500 BP? (LP)	AR	1981	No further work	NE	157
LN768	22 SE SW NW	116	33	Kemmerer	FR,H?	L(d,b,s,r, h);M,G,W,B	U(P); 1920-1940 A.D.	LT	1981	Any impact should be mitigated by testing certain areas	PE	117
LN769	22 SW NE & NW SE	116	33	Kemmerer	FR	L(p,d,b); M, misc. trash	LA; U(H)	LT	1981	Tested; no further work	NE	117
LN770	22 NW NW NE NE NW NE	116	33	Kemmerer	FR	L(d,c); M,G	U(P) U(H)	LT	1981	Tested; no further work	NE	117
LN771	22 NW NW SW NE NW SW SW NW SW	116	33	Kemmerer		L(d,h,c,p) GS	MA/LA	LT	1981	Tested; no further work	NE	117
LN774	21 NW NE SW	116	4	Kemmerer	FR	L(p,d)	LP	LT	1981	Tested; no further work	NE	117
LN775	21 SW NW NW SE NE NE	116	4,5 4 5	Kemmerer		L(p,b,c,d) GS; M,G,B	LP U(H)	LT	1981	Tested; no further work	NE	117

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN776	21 SE SW SW SW	116	4	Kemmerer		L(d)	U(P)	LT	1981	No further work	NE	117
LN777	21 SE SE SE	116	5	Kemmerer	FR	L(d,u,b)	U(P)	LT	1981	Tested; no further work	NE	117
LN778	22 NW SW SE	116	33	Kemmerer		L(d,c,b)	U(P)	LT	1981	No further work	NE	117
LN779	22 SE SE SW SW NE NE NW NW	116	33,4 33 4	Kemmerer	FR	L(d,c)	U(P)	LT	1981	Tested; no further work	NE	117
LN780	22 SE SE SW SW SE SW	116	33	Kemmerer	FR	L(d,c)	U(P)	LT	1981	Tested (1981); excavate	PE	117
LN781	22 SE NW SE	116	33	Kemmerer		L(d,b)	U(P)	LT	1981	No further work	NE	117
LN782	22 NE NW SW	116	33	Kemmerer		L(d,b,s); M	U(P); U(H)	LT	1981	No further work	NE	117
LN783	22 SE NE SW	116	33	Kemmerer	H,FR	L(d); W,G,M,B	U(P); U(H)	LT	1981	Tested; no further work	NE	117
LN786	22 NE SW SW SW	116	33	Kemmerer	FR,H	L(d,s,c,p)	LP	LT	1981	Tested; avoid	PE	117
LN787	21 22 SE SW SW NE NW NW	116 116	33 4 33 4	Kemmerer	FR,H floors?	L(p,b,d), bone pendant, mammal bone; historic trash	LP (1120±80BP 1100±50BP 1380±60BP [C-14 dates]); U(H)	LT	1981	Tested; avoid	PE	117

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN794	21 SW NW SW NE	116	29	Kemmerer		L(d,p); M,G,C,W,B	MA?; 1920 A.D.	LT	1981	No further work	NE	71, 117
LN817/ SW3614	21 S NE SW SE NW SW	111	30	Fontenelle SE	FR	L(c,d)	U(P)	AR	1981	No further work for this project	NE	89
LN821	20 SE NW NW SE	116	6	Elkol	FR	L(p,d)	U(P)	BYU	1981	Avoid	NE	36
LN824	22 N SW SW S NW SW SW NE SW NE SE SW	113	27	Cow Hollow Creek	H,FR	L(c,d),B	U(P)	AR	1981	No further work	PE	142
LN825	21 20 NE NE SW SW 34 NW NE, NW NE 6	116 116	34 6	Kemmerer, Elkol	FR	L(d,s,b)	U(P)	AERC	1981	Monitor construction	NI	66
LN826	20 NW SE NW NW	116	6	Elkol	FR,H	L(d),GS	U(P)	AERC	1981	Test	NI	66
LN865	22 NE NW	116	22	Kemmerer		L(d,u),GS	U(P)	WWC	1981	Avoid	NI	---
LN879	22 NE SE NW SE SE NW	116	33	Kemmerer		L(d)	U(P)	LT	1981	No further work	NE	117
LN883	22 SW SE	116	33	Kemmerer	FR	L(d); W,G,M, modern trash	U(P); U(H)	LT	1981	No further	NE	117
LN884	21 SW NE SW NW	116	4	Kemmerer		L(d)	U(P)	LT	1981	No further work	NE	117

TABLE 1-III (Continued)

Site No. (48)	Location TN	Location RW	Location Sec.	USGS Quad	Cultural Characteristics Feat.	Cultural Characteristics Artif.	Cultural Characteristics Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN885	21 SW SE SW NW SE SW	116	4	Kemmerer		L(d); W,G,M	U(P); U(H)	LT	1981	No further work	NE	117
LN886	21 SE NW SW	116	4	Kemmerer	H?	L(d,c)	U(P)	LT	1981	No further work	NE	117
LN887	21 SW NW NW	116	4	Kemmerer	FR	L(d,c)	U(P)	LT	1981	No further work	NE	117
LN888	21 N NW SW	116	4	Kemmerer		M,G; L(c)?	U(H); U(P)?	LT	1981	No further work	NE	117
LN889	21 SE NW NW NW	116	4	Kemmerer		L(d,b,u,s) GS; G	U(P)	LT	1981	No further work	NE	117
LN892	22 NW NE SW SW	116	33	Kemmerer	FR	L(d)	U(P)	LT	1981	No further work	NE	117
LN894	21 NW NE SE SE	116	5	Kemmerer	H,FR	M, wire	U(H)?	LT	1981	No further work	NE	117
LN899	22 SE NE SW NE SE SW	116	28	Kemmerer		M,W,G, shirt, charcoal; L(b,d)	U(H); U(P)	LT	1981	No further work	NE	117
LN902	21 NE NW SW NW	116	4	Kemmerer	Small coal mine: shaft, spoil pile	G,M,W,B, clothing, ceramics	U(H)	LT	1981	No further work	NE	117
LN903	21 SW SW NW, NW NW SW SE SE NE, NE NE SE	116	4,5 4 5	Kemmerer		W,G,M; L(d)	U(H); U(P)	LT	1981	No further work	NE	117

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
LN904	21	116	5 NE SE SE SE	Kemmerer		M, leather strap	U(H)	LT	1981	No further work	NE	117
LN905	22	116	33 SW NE SW NE SW SW	Kemmerer	"open" coal mine; dugout in hillside, 2 coal piles	W, wire, steel cable, G, fence posts w/ barbed wire	U(H)	LT	1981	Site's history should be investigated	NE	117
LN906	22	116	33 NE NE SW	Kemmerer	"open" coal mine, coal pile	Car, M, G, cable, steel pulley, steel drum pieces	1900-1919 A.D.?	LT	1981	No further work	NE	117
LN913	26	113	12 SE SW NE NE	La Barge		L(d,c)	U(P)	AR	1981	No further work	NE	203
LN914	26	113	12 NE SW NE	La Barge	FR, H	L(d,c)	U(P)	AR	1981	No further work	NE	203
LN915	26	112	7 SW SE NW	La Barge	H, FR	L(d)	U(P)	AR	1981	Test, monitor construction	NE	203
LN919	22	112	11 NE SW	Fontenelle	H, FR	L(p,r,u,s, b,d), GS	EA, LA	SA	1981	Avoid	PE	134
LN924	26	112	6 NE NE SE NW	La Barge	H, FR	L(c)	U(P)	AR	1981	No further work	NE	199
LN925	21	112	7 SW SW NE SW	Cow Hollow Creek		L(d)	U(P)	HPC	1981	No further work	NE	---
LN961	21	116	20	Kemmerer	Conroy Mine		H				NI	---

TABLE 1-III (Continued)

Site No. (48)	Location TN	RW	Sec.	USGS Quad	Cultural Characteristics Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
LN1000	21	116	8	Kemmerer	Moyer Junction Tunnel		H				NI	---
LN1003	21 NE SW	116	36	Kemmerer	Oakley Mine		H				NI	---
LN1013	22	116	33	Kemmerer	Sawmill remains		H				NI	---
LN1017	22 SW NE	116	33	Kemmerer	Sublette No. 5 mine		H				NI	---
LN1019	22 NE	116	13	Kemmerer	Sublette No. 6 mine		H				NI	---
LN1048	21 W SW SW	114	22	Opal	H	L(d,h,s,r, b,c),GS	U(P)	HPC	1982	Shovel testing completed; excavated, no further work	NE	108, 109
LN1049	21 NW SE SW SW	114	22	Opal	H	L(d,r,b,s, k,h),GS	EA (5640 B.P. ± 70, 5500 B.P. ± 70) MA (3690 ± 50 B.P.)	HPC	1982	Excavate, shovel testing completed; excavated, no further work	NE	108, 109
LN1050	21 NE SE SW SW	114	22	Opal	H,FR	L(d,u),GS: G,cartridges	LP (1100 B.P., 950 ± 50); 1904 A.D.	HPC	1982	Excavate prehistoric component; excavated, no further work	NE	109
LN1051	21 SE SW, SW SE	114	22	Opal	FR	L[d(1000+), c,r,b,preforms],GS; G,M	MA; pre-1920 A.D.	HPC	1982	Excavate prehistoric component (site avoided by NWP).	DE	108
LN1082	22 SE NW SE SW	113	1	Shute Creek Lake		L(c,d)	U(P)	GK	1979	None given	NI	141

TABLE 1-III (Continued)

Site No.	Location				Cultural Characteristics					Recorder's	Nat.	Project
(48)	TN	RW	Sec.	USGS Quad	Feat.	Artif.	Age	Recorder	Year	Recommendation	Reg.	Affiliation
LN1084	22 SW NE	113	12	Shute Creek Lake		L(d,r)	U(P)	GK	1979	None (recorded in field as IF)	NI	141
LN1088	26 SE NE NW NW	113	2	La Barge	FR		U(P)	AR	1982	No further work	NE	223
LN1089	26 NW NE NW NW	113	1	La Barge	FR		U(P)	AR	1982	No further work	NE	223
LN1097	22 NE SW	113	6	Graham Reservoir	H	L(d)	U(P)	AR	1982	Excavate	PE(local)	140
LN1098	23 NW SW, SW SW	114	36	Graham Reservoir	H	L(d,c)	U(P)	AR	1982	Map, monitor excavate	NE	140
LN1099	23 S NE NE N SE NE	114	35	Graham Reservoir	H(30)	L(d)	U(P)	AR	1982	Avoid or excavate	PE(local)	140
LN1100	23 SW SE, NW SE	114	26	Graham Reservoir	FR	L(d,c) [1000+]	U(P)	AR	1982	Avoid or excavate	PE(local)	140
						Sublette County						
SU10*	27	113	16(?)	The Hogsback		L(d),C	U(P)	UU	1962	None	None	---
SU11	28 SW SW	114	10	Pine Grove Ridge		L(d)	U(P)	UW	1975	None	NI	---
SU25*	29 SE SW NE	115	16	Mt. Thompson, Wyoming Peak		L(s,b,d) B,CH	U(P)	UW	1977	Test, excavate	NI	---
SU26*	29 SE NE SW	115	16	Mt. Thompson		L(d),GS, CH	U(P)	UW	1977	Test	PE	---

TABLE 1-III (Continued)

Site No. (48)	Location TN	RW	Sec.	USGS Quad	Cultural Characteristics Feat.	Artif.	Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
SU37	28	113	33 SE SE SE	The Hogsback		L(d)	U(P)	WWC	1977	None	None	347
SU38	28	113	32 SW NE NE	Cretaceous Mtn.		L(b,d)	U(P)	WWC	1977	No further work	NI	347
SU39	28	113	29 NE SE SE	Cretaceous Mtn.	H	L(p,s,d; tool),GS	U(P)	WWC	1977	Test	NI	347
SU40	28	113	28 SE SE NW	Cretaceous Mtn.		L(p,k),B, BD	U(P)	WWC	1977	Limited excavation	NI	347
SU41	28	113	28 C N/2 SW	Cretaceous Mtn.		L(p),GS	U(P)	WWC	1977	Extensive surface collection	NI	347
SU45	28	113	35 NE SW NE	La Barge		L(d)	U(P)	AS	1979	No further work	NI	301, 304
SU46	28	113	35 NW SE NW	La Barge		L(p,b,c,d)	LP	AS	1979	Surface collection	NI	304
SU50	30	115	1 SW NW SW	Springman Creek	SA		U(P)	USFS	1979	Map, record	NI	435
SU51	27	114	23 C SW	The Hogsback	SC		U(P)	WWC	1979	Avoidance, re-alignment of road	NI	284
SU66*	29	111	4	Milleson Draw	Muleshoe Ranch		H				NI	---
SU74	27	112	18 SW SW NE NE	La Barge	H	L(d)	U(P)	WWC	1979	Avoid or test	NI	241
SU111	29	113	20 NW SE SE	Cretaceous Mtn.		L(d)	U(P)	WWC	1980	Avoidance, move well 200' E or NE	PE	414

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SU127	28 SE SW SW SW	114	11	Cretaceous Mtn.		L(s,r,d)	U(P)	WWC	No date	Avoid or monitor	NI	365
SU128	28 NE NE NE NE	114	9	Pine Grove Ridge		L(p,u)	LP(?)	WWC	No date	Monitor	NI	365
SU150	27 SW SW SE SW	113	27	The Hogsback		L(c,d),GS	U(P)	WWC	1981	Monitored, site largely destroyed	NE	274
SU152	30 NW NE SE; NE NW SE	113	33	Deer Hill	FR		U(P)	AR	1981	Avoid (Lander cut-off at N end of site)	NE	85
SU153	30 N SE SW	113	28	Deer Hill	FR,H	L(d)	U(P)	AR	1981	Monitor	NE	431
SU168	28 NW NW SW NW	110	19	Sugar Loaf NW		L(d,k,s,b, p?),B(?)	U(P)	AS	1981	Avoid by reroute; Test prior to future impact	PE	---
SU177	28 NW SE SE SE	115	1	Pine Grove Ridge	S (hunters' blind?)		U(H)	WWC	1981	Avoid or test	NI	363
SU195	29 SE NE SE SW	113	36	Chimney Butte, Cretaceous Mtn.	H		U(P)	AR	1982	No further work	NE	428
SU197	28 SE SW, NE SW	111	35	La Barge	H	L(d,p,s), GS	U(P)	PEC AR	1982 ?	No further work Test	NE PE(local)	---
SU213	27 NE NE SE	112	5	La Barge	H,FR	L(d)	U(P)	AR	1982	Map, collect, test	PE(local)	254
SU221	28 NE SE SE SE	112	9	Chimney Butte	FR,H	L(b)	U(P)	AR	1982	Monitor (rerouted to avoid)	NE	298

TABLE 1-III (Continued)

Site No.	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's	Nat.	Project
(48)	TN	RW	Sec.		Feat.	Artif.	Age			Recommendation	Reg.	Affiliation
SU222	29 NE SE NW NW	111	31	Milleson Draw	FR		U(P)	AR	1982	No further work	NE	298
SU239	29 S 1/2 SW NE NE NW	111	30,31 30 31	Milleson Draw	FR,H	L(p)	LP; U(P)	AR	1982	Monitor	NE	298
SU242	30 SW NE, NW SE, NE SW, SE NW	111	33	Big Piney East	FR,H	L(d,p,b,k,c)	U(P)	AR	1982	Line rerouted to avoid; monitor	NI	298
SU244	28 NW	112	33	Chimney Butte	FR,H	L(d)	U(P)	AR	1982	Pipeline rerouted; Nominate/determine eligibility of site	PE(local)	253
SU253	28 SE SE SW SW	113	21	Cretaceous Mtn.	H		U(P)	AR	1982	No further work	NE	342
SU256	27 NW SW SE SW	113	36	La Barge	FR	L(d,c)	U(P)	AR	1982	No further work	NE	223
SU257	27 SE SW SE SW	113	36	La Barge	FR	L(d)	U(P)	AR	1982	No further work for AR's project; test future work	PE(local)	223
SU258	27 NE SW SE SE	113	36	La Barge	FR	L(d)	U(P)	AR	1982	No further work	NE	223
SU259	27 27 SW SW NW SE SE	112 113	31 36 31 36	La Barge	H	L(d,c)	U(P)	AR	1982	No further work	NE	223
SU267	29 NE SW SE NW	112	33	Chimney Butte	FR		U(P)	AR	1982	No further work	NE	379

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SU268	29 NW SW NW SW	112	29	Chimney Butte	H		U(P)	AR	1982	No further work	NE	379
SU269	29 NE	112	29	Chimney Butte	H	L (not inventoried)	U(P)	AR	1982	Excavate, monitor construction	PE(local)	379
SU340*	28 SW SE	114	11	Cretaceous Mtn.	C		U(P?)	UW	1975	None	NI	---
SU341*	28 NW NW NW	114	13	Cretaceous Mtn.	SC		U(P)	UW	1975	None	NI	---
SU353	28 SW SW NE	113	22	Cretaceous Mtn.		L(tool,d)	U(P)	WWC	1975	None	NI	324, 326
SU354	29 SW SE NE	113	29	Cretaceous Mtn.		L(d,tools), B	U(P)	WWC	1975	None (site believed to be stratified)	NI	388
SU355*	28 SW NW SE	113	8	Cretaceous Mtn.		L(tool),GS	U(P)	WWC	1975	None	NI	---
SU386	28 NW SW SE NW	111	27	La Barge		L(tool,d)	U(P)	WWC	1977	Test; monitored during construction	NI	287
SU402	28 NE NW SW NE	112	3	Chimney Butte	H,FR	L(d)	U(P)	AR	1981	No further work	NE	300
SU430	27	109		Sugarloaf ?	Emigrant Butte		H				NI	---
SU453	28 SW NE SE	111	18	Milleson Draw	H,FR	L(d)	U(P)	AR	1982	No further work for this project	PE	292
SU454	28 C SE NE	111	18	Milleson Draw	H,FR	L(d)	U(P)	AR	1982	No further work for this project (Tested 1982)	PE	292

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SU472	27 NW NE	112	20	La Barge	H,FR	L(d[1000+], c)	U(P)	AR	1982	Detailed recording (further analysis may alter its status)	NE	177
SU474	27 SE SW, SW SW	112	20	La Barge	H,FR	L(d,c,h), GS	U(P)	AR	1981	Detailed recording	NE	177
SU487	27 NW SW NW SW	112	4	La Barge	H		U(P)	AR	1982	No further work	NE	254
SU488	27 SW SE SW NW	112	4	La Barge	H		U(P)	AR	1982	No further work	NE	254
SU489	27 NW NW NE 28 SW SW SE	112 112	4 33	La Barge	H	L(d,c)	U(P)	AR	1982	Monitor	PE	254
SU490	28 NW SE, NE SE	112	33	La Barge	H	L(d)	U(P)	AR	1982	Monitor	PE(local)	254
SU491	28 SE NE	112	33	La Barge	FR		U(P)	AR	1982	No further work	NE	254
SU492	28 NE NE NE SE NE NE	112	33	La Barge	FR	L(d,c)	U(P)	AR	1982	No further work	NE	254
SU493	27 NE NE 28 E 1/2	112 112	5 32	La Barge	H,FR	L(d,c)	U(P)	AR	1982	Avoid	PE	254
SU502	29 S NW SW	113	34	Cretaceous Mtn.	FR	L(d)	U(P)	AR	1982	Test if any impact to occur; tested, 1982: no further work	NE	399

TABLE 1-III (Continued)

Site No. (48)	Location TN	Location RW	Location Sec.	USGS Quad	Cultural Characteristics Feat.	Cultural Characteristics Artif.	Cultural Characteristics Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
SU503	29	113	34 SE SW NE SW	Cretaceous Mtn.	FR		U(P)	AR	1982	No further work	NE	399
SU504	29	113	33 SW SW NE SE	Cretaceous Mtn.	FR		U(P)	AR	1982	No further work	NE	399
SU505	29	113	33 NE SE SE	Cretaceous Mtn.	Alignment? Cairn? FR		U(P)	AR	1982	Test if any impact to occur; tested 1982: no further work	NE	399
SU508	28	113	3 NW NW NW NE	Cretaceous Mtn.	H		U(P)	AR	1982	Collect data; site recording "approximate"	PE(local)	---
SU550	29	114	8 NE SE NW NW	Springman Creek	SC (3-4)		U(P)	BLM	1982	Test	PE	405
SU551	29	114	8 SW NW NW NW	Springman Creek	SC (1)		U(P)	BLM	1982	Test	PE	405
						Sweetwater County						
SW322	19	105	16 NW NW NW	Pilot Butte	Quarry	L(d,k)	U(P)	WWC	1974	None	NI	---
SW348	21	108	23 C	Chrisman Ranch		L(s,d)	U(P)	UW	1972	"Low priority"	NI	---
SW390	22	111	36 SW NW NW	Whiskey Buttes	FR	L(d,p,tools)	U(P)	WWC	1973	None	NI	---
SW476	19	105	28 NW NW	Kanda		L(p,u,d,k, tools,b)	U(P)	BLM, WWC	1975	None	NI	---

TABLE 1-III (Continued)

Site No. (48)	Location TN	Location RW	Location Sec.	USGS Quad	Cultural Characteristics Feat.	Cultural Characteristics Artif.	Cultural Characteristics Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
SW897*	22 SW SW & SE	111	27, 28	Whiskey Buttes	H	L(d),GS	U(P)	UW	1977	Monitor	NI	93
SW898*	22 NE NE NW	111	34	Whiskey Buttes	H,FR	L(d)	U(P)	UW	1977	Monitor	NI	93
SW899*	22 NW NE NW	111	35	Whiskey Buttes	H,FR	L(d)	U(P)	UW	1977	Monitor	NI	93
SW902*	22 NW NW NE	111	35	Whiskey Buttes	H,FR	L(b,d,tools), GS	U(P)	UW	1977	Map, monitor	NI	93
SW903*	22 NW NE NE	111	35	Whiskey Buttes	H,FR	L(?)	U(P)	UW	1977	Monitor if access deviates from existing road	NI	93
SW966	26 NE SW NE	110	33	Monument Butte	H		U(P)	WWC	1978	None	NI	---
SW984	20 NW SE SE	105	18	Pilot Butte		L(d,tools)	U(P)	WWC	1978	None	NI	37
SW1051	19 SW SW SW	112	2	Moxa	FR	L(d),GS	U(P)	UW AS	1978 1978	Tested 1978; subsequent recommendation to test & monitor (UW). No further work AS' project only	NE (AS)	33
SW1232	22 NE SE SE NW SW SW	111	19, 20 19 20	Fontenelle SE	FR	L(d,c)	U(P)	WWC	1978	Reroute	NI	80
SW1240	21 NE NE SE NW NW SW	111	19, 20 19 20	Fontenelle SE		L(d,c)	U(P)	WWC	1979	No further work	NI	80

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW1241	21 NW SW NW NE SE NE	111	29, 30 29 30	Fontenelle SE	FR	L(b,d[200+])	U(P)	WWC	1979	Avoid, test (line rerouted)	NI	80
SW1247	22 SE SE SE SW SW SW	111	19, 20 19 20	Fontenelle SE	H	L(d)	U(P)	WWC	1979	Monitor	NI	80
SW1274	22 E SE NE W SW NW	111	19, 20 19 20	Fontenelle SE		Quartzite cobbles extend for 1/4 mi along pipeline route; L(c,d)	U(P)	WWC	1979	No further work	NI	80
SW1275	20 SE NW SW	112	34	Moxa	FR,H	L(d,b)	U(P)	WWC	1978	Use proposed route	NI	45
SW1369	21 SW SW SW	111	17	Fontenelle SE	H,FR	L(b,d)	U(P)	WWC	1979	Site should be resurveyed & mapped	NI	82
SW1412	21 C NE NW NE	111	19	Fontenelle SE	FR	L(d,tools)	U(P)	WWC	1979	Test if south side of site is disturbed	NI	82
SW1414	21 NW NE SW	111	17	Fontenelle SE		L(c,d, tools)	U(P)	WWC	1979	No further work	NE	82
					H,FR	L	Archaic?	AR	1981	Test if features are threatened	NE	85
SW1441	19 SE NW NW	112	11	Moxa	H?	L(d,b,r)	U(P)	AS	1978	Map, collect, test; disturbed portion of site monitored, tested. Results unclear from site report	NI	31

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW1525	19 NW NW SW	105	16	Kanda		L(d)	U(P)	WWC	1979	No further work	NI	3
SW1526	19 NW NW SW	105	16	Kanda		L(p,b,d)	LA	WWC	1979	No further work	NE	3
SW1528	18 NW SE NW	105	18	Kanda	FR	L(p,b,c,d)	U(P)	WWC	1979	No further work	NE	3
SW1529	18 SW SE NW	105	18	Kanda	FR	L(c,s,d)	U(P)	WWC	1979	No further work	NE	3
SW1530	18 NW NE SW	105	18	Kanda	FR	L(b,d)	U(P)	WWC	1979	No further work	NE	3
SW1531	18 SW SW SW	105	18	Kanda	H,FR	L(p,d)	U(P)	WWC	1979	No further work	NE	3
SW1532	18 SE NW NE	105	18	Kanda	FR	L(d,c)	U(P)	WWC	1979	No further work	NE	3
SW1533	18 SW SW NW NE	105	18, 19 18 19	Kanda	FR	L(p,c,d)	U(P)	WWC	1979	No further work	NE	3
SW1548	18 NE SE NE	106	24	Kanda		L(d),GS	U(P)	WWC	1979	No further work	NE	3
SW1550	18 NW SE SE	106	24	Kanda	H	L(d,p,b)	U(P)	WWC	1979	No further work	NI	3
SW1676	19 NE NE SE SE	111	19	Granger	FR	L(d)	U(P)	WWC	1979	Clearance	NE	9
SW1738	26 NE NW SE	109	12	Twelvemile Knoll		L(d,b,p)	U(P)	AS	1978	Avoid	NI	188

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW2065	19 NE NW NW	112	13	Moxa	FR	L(d)	U(P)	AS	1980	No further work	NE	30
SW2066	19 SW NW NE	112	11	Moxa	FR	L(d,p)	U(P)	AS	1980	Avoid or monitor; pipeline rerouted	NE	30
SW2067	19 SE SE NW	112	11	Moxa		L(d)	U(P)	AS	1980	Avoid or monitor; pipeline rerouted	NE	30
SW2075	19 NW SE SE	112	11	Moxa		L(d),GS	U(P)	AS	1980	No further work	NE	30
SW2314	18 NE SW NE	111	10	Granger		L(d,s,c,p)	LP	LOPA	1980	Tested by PMZ, 1980; no further work	NE	8
SW2315	18 SW NE NW	111	10	Granger	H,FR	L(d,c,u,b)	U(P)	LOPA	1980	Tested by PMZ, 1980 and 1981; needs further work	NI	8
SW2316	18 NW SW SW	111	12	Granger		L(d,u,c,b)	U(P)	LOPA	1980	Tested by PMZ, 1980; mapped 1981; no further work	NE	8
SW2327	18 NE NE SE	111	11	Granger		L(d,s)	U(P)	LOPA	1980	Monitor; no further work done by PMZ	NE	8
SW2328	18 SW NW SE	111	11	Granger		L(d,b)	U(P)	LOPA	1980	No further work; not investigated by PMZ	NE	8
SW2491	19 NE NW NE SE	111	28	Granger	"Rock cobble features" (4)	L("all types",p)	U(P)	WWC	1980	Relocate bore hole or test	PE	22

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW2492	19 SE NW NE SE	111	28	Granger		L	U(P)	WWC	1980	Relocate bore hole or test	NI	22
SW2600	22 NW NW NW	107	9	Pittman Well		L(d)	U(P)	WWC	1980	Avoid	NE	---
SW2611	22 SW NW NW	109	18	Thoman School	No information		H	USBR			NI	---
SW2617	26 NE SW NE	109	13	Twelvemile Knoll		L(d)	U(P)	AR	1980	No further work	NE	185
SW2636	25 NE NW NW	109	14	Monument Butte NE	H,FR	L(s,d[700+]), GS	U(P)	AR	1980	Tested, mapped; avoid or test further	PE	186
SW2637	25 NE SW NW	109	1	Monument Butte NE	H,FR	L(d[400+],p)	MA	AR	1980	Tested; further testing necessary	NE	186
SW2638	26 NE NE SE	109	26	Monument Butte NE	H,FR	L(b,d[200], p);M	U(P); pre 1930 A.D.	AR	1980	Portion of site area requires testing	NE	186
SW2639	25 NE NW SW	109	14	Monument Butte NE	FR		U(P)	AR	1980	No further work	NE	186
SW2640	26 NE SE SE	109	35	Monument Butte NE	FR	L(d,p);M,G	MA; 1920-present	AR	1980	No further work	NE	186
SW2654	21 NE SW SE	105	32	Pilot Butte	H?	L(d,p)	U(P)	BLM	1980	Map, test	NI	72
SW2655	21 SW NE SE	105	32	Pilot Butte	H	L(d,b,s)	U(P)	BLM	1980	Map, collect	NE	72
SW2656	21 NW SE SE	105	32	Pilot Butte	H	L(d)	U(P)	BLM	1980	Map, collect, test hearth	NE	72

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW2657	21 NW SE SE	105	32	Pilot Butte	FR	L(d),B (burnt)	U(P)	BLM	1980	Test	NI	72
SW2662	18 SW SW NW	111	11	Granger	FR,SC(?)	L(b,d)	LA,LP	UW	1980	Tested only w/in Mapco ROW	PE	8
SW3035	20 SE NW NE	106	12	Pilot Butte	H	L(d),GS?	U(P)	BLM	1981	No further work	NE	---
SW3205	19 SW NW SW	105	29	Kanda	S(lime kiln)	G,M,bricks	1890-1905 A.D.	WWC	1981	Place on historic sites inventory	PE	---
SW3243	19 SW SE SW SE	111	19	Granger		G,M	1940s	AS	1981	No further work	NE	17
SW3244	19 NW NE SW SE	111	19	Granger		L(d,b)	U(P)	AS	1981	No further work	NE	17
SW3245	19 NW SE NW SE	111	19	Granger		L(d)	U(P)	AS	1981	No further work	NE	17
SW3246	19 NE NW SE, NW NE SE	111	19	Granger	H	L(d[500+], p,b)	LA	AS	1981	Avoid or map and test	PE	17, 18
SW3247	19 SW SW SW NW	111	20	Granger		G,M	1940-1950	AS	1981	No further work	NE	17
SW3248	19 NW SE SW NW	111	20	Granger	H,FR H,FR,S (with posts & prepared surface)	L(d) L(d,r)	U(P) U(P)	AS AR	1981 1981	Avoid or test; tested, construction of pipeline allowed	PE NE	17, 18
SW3249	19 SE NW	111	20	Granger		L(d,c)	U(P)	AS	1981	No further work	NE	17

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW3250	19 SE NW SW NE	111	20	Granger		L(d)	U(P)	AS	1981	No further work	NE	17
SW3353	19 SW NE SE NE	111	19	Granger	FR	L(d);trash	U(P;H)	AR	1981	No further work	NE	28
SW3354	19 NW NW SE NE	111	19	Granger	FR	L(d,c)	U(P)	AR	1981	No further work	NE	28
SW3355	19 SE SE NW NE	111	19	Granger	FR		U (P?)	AR	1981	No further work	NE	28
SW3356	19 NE SW NW NE	111	19	Granger	FR	L(d,c)	U(P)	AR	1981	No further work	NE	28
SW3357	19 W NE NW	111	19	Granger	H,FR	L(d,b)	U(P)	AR	1981, 1982	No further work	NE	19, 28
SW3359	19 SE SE NE	112	13	Moxa	FR		U(P)	AR	1981	No further work	NE	28
SW3394	18 SW SE SE	106	24	Kanda	H	L(p,d,ch,c)	Rose Springs or Eastgate series point (?)	WWC	1981	Avoid; test	NI	5
SW3615	21 SE NE SE	111	30	Fontenelle SE	H,FR	L(c,d)	U(P)	AR	1981	No further work	NE	89
SW3618	18 SW NE NE SE	111	3	Granger	FR	L(b,d)	U(P)	WWC	1981	Avoid	PE	7
SW3655	26 NW SE NE	110	17	Monument Butte	FR	L(b,s,p, d);M	U(P); 1920 AD (H)	MZ	1981	No further work, site tested	NI	191, 193

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW3806	26 C SW NW	110	34	Monument Butte	FR	L(d,p,b, r,s,u,c)	PI(?) MA	MZ	1981	Avoid or map, collect, test	PE	195
SW3807	26 SW SW NW SE SE NE	110	34, 33 34 33	Monument Butte	FR	L(p,b,c,r,d)	PI(?) LP	MZ	1981	Avoid; test before future impact	PE	195
SW3808	19 SE SW SE SE NE NW NE NE	111	18, 19 18 19	Granger	H	L(d,r)	U(P)	AR	1982	Test	PE (local)	16
SW4044	20	105	19	Pilot Butte	Foundation		H				NI	---
SW4045	20	105	20	Pilot Butte	Foundation		H				NI	---
SW4072	21 NE SE	109	8	Lombard Buttes	Johnson Ranch		H				NI	---
SW4075	21 SW SE	109	8	Lombard Buttes	(Rood) Ranch		H				NI	---
SW4095	18 NW NE SW NE NW SW	105	6	Kanda	H,SC	L(b,d)	U(P)	BLM	1982	Map, test, collect	PE (local)	1
SW4096	18 NW NE NE SW	105	6	Kanda	H,FR	L(d)	U(P)	BLM	1982	Test, collect, excavate	PE (local)	1
SW4097	18 NE NW NE SW	105	6	Kanda	FR		U(P?)	BLM	1982	No further work	NE	1
SW4098	18 NE NW NE SW	105	6	Kanda	S		U(H)	BLM	1982	Test, needs historian's evaluation	NI	1
SW4099	18 SW NW SW SW	105	6	Kanda	FR	L(p,c,d,u)	LA	BLM	1982	Map and test	PE (local)	1

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW4100	18 NE NW SW SW	105	6	Kanda	FR	L(d)	U(P)	BLM	1982	Test	PE (local)	1
SW4101	18 C SW SW SW	105	6	Kanda		L(c,d)	U(P)	BLM	1982	No further work	NE	1
SW4102	18 NW SE SE	105	6	Kanda	S	W,M	1900-1940 A.D.	BLM	1982	No further work	NE	1
SW4112	22 NW NE	109	18	Thoman School	Albertini Ranch		H				NI	---
SW4113	22	109	18	Thoman School	Hawley Cabin		H				NI	---
SW4123	22 SE NE	110	12	Thoman School	Hawley Ranch		H				NI	---
SW4152	22 SW SE NW NW	106	32	Clay Buttes SW	H	L(d)	U(P)	OA	1982	Tested; clearance	NE	74
SW4210	26 NE SW NW	110	34	Kanda		L(p,b,u,r,d)	LP	MZ	1981	Test if necessary to determine eligibility.	NI	196
SW4301	26 SE SE SE NE	109	2	Sugar Loaf		L(b,r,c)	U(P)	NTP	1980	None	PE	---
SW4309	21 SW SE	105	32	Pilot Butte	H, game processing area?	L(d[200+],s, p,b,u,r,c), B(buried layer big game bone)	EA, LP	BLM	1982	Map, collect, test	PE (local)	---
SW4337	21 NE NE SE	105	32	Pilot Butte, Clay Butte SE	H,SC(?)	L(p,d)	PI, LP	BLM	1982	Map, collect, test	NI	---
SW4379	26 NW NW SW SW	110	16	Monument Butte	H,FR	L(d,c)	U(P)	AR	1982	Test	PE	189

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
SW4380	26 SE NE NE SE	110	28	Monument Butte	FR	L(d,c)	U(P)	AR	1982	No further work	NE	189
SW4630	23 SW SW NE NW	107	30	Pittman Well		W,M,G	post 1930 A.D.	UW	1982	No further work	NE	140
SW5045	19 SE NW NW SW	111	34	Granger		L(d,c/ch)	U(P)	CA	1982	No further work	NE	---
SW5071	22 SE NE NE SE	106	31	Clay Buttes SW	H		U(P)	MZ	1982	No further work	NE	122
SW5092	22 NW SE NE NE	110	24	Thoman School		L(d,r)	U(P)	UW	1982	No further work	NE	126
SW5093	22 SW NE NE	110	24	Thoman School		L(d)	U(P)	UW	1982	Test (tested 10/82-no information on results)	PE(local) (?)	126
SW5094	22 SE NW NE	110	24	Thoman School	FR	L(d,c,p), GS	LP	UW	1982	Shovel tested, no further work	NE	126
SW5105	19 SE NW NE	105	8	Pilot Butte		L(d), GS?	U(P)	BLM	1982	No further work	NE	---
SW5277	21 NW NW NE	107	26	Chrisman Ranch	FR	L(d,b,p)	U(P)	BLM	1982	Test, collect	NI	---
Miscellaneous sites without Smithsonian numbers												
Ross Butte 11	30 NW NE SE NE	110	32	Ross Butte	H?,FR	L(d,c)	U(P)	BLM	1979	No further work	NE	373
RB12	30 SW NW NW NE	110	32	Ross Butte		L(d)	U(P)	BLM	1979	No further work	NE	373

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
RB13	29 SE SW NW SW	110	3	Ross Butte	FR	L(d,r,c, graver)	U(P)	BLM	1979	Map, test	NE	373
RB14	29 NE NW NE SW	110	3	Ross Butte		L(d,c)	U(P)	BLM	1979	No further work	NE	373
RB15	29 SW NW NW SE	110	3	Ross Butte		L(d)	U(P)	BLM	1979	Test	NI	373
RB16	29 SW NW SE NE	110	10	Ross Butte	H	L(d)	U(P)	BLM	1979	Test	NI	373
RB17	29 NW NE SW NW	110	10	Ross Butte		L(d,r,blades) GS	U(P)	BLM	1979	Test	NI	373
BLM-1	19 SW NE NW	105	29	Kanda	"Campsite"; no information		U(P)	BLM	1977	Avoid or excavate	NI	12
BLM-2	19 NW NW NW	105	32	Kanda		L	U(P)	BLM	1977	None	NI	12
BLM-3	19 SW SW SW SE SW SW	105	32	Kanda		L	U(P)	BLM		None	NI	---
BLM-4	19 NW SE SW	105	32	Kanda		L	U(P)	BLM		None	NI	---
BLM-5	22 SE NE SE	112	23	Fontenelle SE		L	U(P)	BLM		None	NI	---
BLM-6	22 SW SE SW	112	24	Fontenelle SE		L	U(P)	BLM		None	NI	---
BLM-7	22 NW NW SW	112	25	Fontenelle SE		L	U(P)	BLM		None	NI	---

TABLE 1-III (Continued)

Site No. (48)	Location TN	Location RW	Location Sec.	USGS Quad	Cultural Characteristics Feat.	Cultural Characteristics Artif.	Cultural Characteristics Age	Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
BLM-8	22 SW NW SW	112	25	Fontenelle SE		L	U(P)	BLM		None	NI	---
BLM-9	22 SW SW SW	112	25	Fontenelle SE		L	U(P)	BLM		None	NI	---
BLM-10	22 NE NW NW SE NW NW	112	36	Fontenelle SE	"Campsite"; no information		U(P)	BLM		None	NI	---
BLM-11	22 NW SE NW	112	36	Fontenelle SE	"Campsite"; no information		U(P)	BLM		None	NI	---
HS-1	18 NW NW NE	111	14	Granger	Building at Granger Junction		H	Source:	USGS map		NI	---
HS-2	20 SW SW	105	20	Pilot Butte	Ranch		H	Source:	USGS map		NI	---
HS-3	21 SE NE NE	112	32	Cow Hollow Creek	mine/pit		H	Source:	USGS map		NI	---
HS-4	23 NE NW	111	17	Fontenelle	Facinelli Ranch		H	Source:	USGS map		NI	---
HS-5	23 SW SE	111	7	Fontenelle	CCC bridge		H				NI	---
HS-6	23 NW NE	111	18	Fontenelle	Kinney Ford		H				NI	---
HS-7	29 NE SW NE	113	5	Deer Hill	building		H	Source:	USGS map		NI	---

TABLE 1-III (Continued)

Site No. (48)	Location			USGS Quad	Cultural Characteristics			Recorder	Year	Recorder's Recommendation	Nat. Reg.	Project Affiliation
	TN	RW	Sec.		Feat.	Artif.	Age					
HS-8	29 SE SE	114	2	Springman Creek	ranch		H	Source:	USGS map		NI	---
HS-9	29 SW SW	115	15,16	Mt. Thompson	Snyder Basin Guard Station/Fort Piney(?)		H	Source:	USGS map		NI	---
HS-10	29 NW NW SE	115	17	Mt. Thompson	"prospects"		H	Source:	USGS map		NI	---
HS-11	29 SE SW	115	17	Mt. Thompson	structure		H	Source:	USGS map		NI	---
HS-12	30 NE NE NE	113	31	Deer Hill	ranch		H	Source:	USGS map		NI	---
HS-13	30 NE SW	113	30	Deer Hill	ranch		H	Source:	USGS map		NI	---
HS-14	30 NW SE SE	113	32	Deer Hill	abandoned structure		H	Source:	USGS map		NI	---
HS-15	30 NE SW	114	28	Springman Creek	structure		H	Source:	USGS map		NI	---
HS-16	30 SW NW	114	23	Springman Creek	ranch		H	Source:	USGS map		NI	---
HS-17	30 SW NW	114	15	Springman Creek	ranch		H	Source:	USGS map		NI	---
HS-18	30 SE SE	114	15	Springman Creek	ranch		H	Source:	USGS map		NI	---
HS-19	30 SE NE	114	2	Springman Creek	structure		H	Source:	USGS map		NI	---
HS-20	30 W 1/2 NW	115	2	Wyoming Peak	structures		H	Source:	USGS map		NI	---

TABLE 1-III (Continued)

Site No.	Location				Cultural Characteristics					Recorder's	Nat.	Project
(48)	TN	RW	Sec.	USGS Quad	Feat.	Artif.	Age	Recorder	Year	Recommendation	Reg.	Affiliation
HS-21	30 N 1/2 NE	115	3	Wyoming Peak	structures		H	Source:	USGS map		NI	---
HS-22	30 NE SW NW	115	3	Wyoming Peak	structures		H	Source:	USGS map		NI	---

TABLE 1-IV

SUMMARY INFORMATION ON HISTORICAL TRAILS AND ROUTES WITHIN THE RILEY RIDGE AREA

Site Number	Site Name	Location TN	Location RW	Location Sec.	USGS Quad.	National Register	Type of Current Impact
48LN225	Sublette Cutoff	24	113	5	Names Hill	PE	Direct
		24	114	1	Fort Hill	PE	Direct
		24	114	11	Fort Hill	PE	Direct
		24	114	12	Fort Hill	PE	Direct
		25	112	18	Names Hill	PE	Secondary
		25	112	19	Names Hill	PE	Secondary
		25	112	30	Names Hill	PE	Secondary
		25	112	31	Names Hill	PE	Secondary
		25	113	1	Names Hill	PE	Direct
		25	113	12	Names Hill	PE	Direct
		25	113	13	Names Hill	PE	Direct
		25	113	24	Names Hill	PE	Secondary
		25	113	25	Names Hill	PE	Direct
		25	113	26	Names Hill	PE	Direct
		25	113	35	Names Hill	PE	Direct
		25	113	36	Names Hill	PE	Direct
		26	113	36	Names Hill	PE	Direct
48LN947	Hams Fork Cutoff	20	115	3	Elkol	PE	Secondary
		21	113	19	Opal	PE	Secondary
		21	113	30	Opal	PE	Secondary
		21	114	24	Opal	PE	Secondary
		21	114	25	Opal	PE	Secondary
		21	114	26	Opal	PE	Secondary
		21	114	27	Opal	PE	Secondary
		21	114	28	Opal	PE	Direct
		21	114	29	Opal	PE	Secondary
		21	114	32	Opal	PE	Secondary
		21	115	21	Willow Springs	PE	Secondary

TABLE 1-IV (continued)

Site Number	Site Name	Location			USGS Quad.	National Register	Type of Current Impact
		TN	RW	Sec.			
48LN947 (con't)	Hams Fork Cutoff	21	115	22	Willow Springs	PE	Secondary
		21	115	26	Willow Springs	PE	Secondary
		21	115	27	Willow Springs	PE	Direct
		22	115	36	Kemmerer	PE	Direct
	Hams Fork Cutoff Variant	19	111	10	Moxa	NI	Secondary
		19	111	11	Moxa	NI	Direct
		19	111	13	Moxa	NI	Secondary
		19	111	14	Moxa	NI	Secondary
48LN948	Slate Creek Cutoff	23	111	7	Fontenelle	PE	Secondary
		23	111	8	Fontenelle	PE	Direct
		23	111	9	Fontenelle	PE	Direct
		23	111	18	Fontenelle	PE	Secondary
		23	113	13	Shute Creek Lake	PE	Secondary
		23	113	14	Shute Creek Lake	PE	Secondary
		23	113	15	Shute Creek Lake	PE	Secondary
		23	113	16	Graham Reservoir	PE	Secondary
		23	113	17	Graham Reservoir	PE	Secondary
		23	114	11	Graham Reservoir	PE	Secondary
		23	114	13	Graham Reservoir	PE	Direct
		23	114	14	Graham Reservoir	PE	Secondary
		23	114	15	Graham Reservoir	PE	Direct
		23	114	16	Graham Reservoir	PE	Secondary
48LN949	Opal Stage Road	21	114	2	Opal	NI	Secondary
		21	114	11	Opal	NI	Direct
		21	114	14	Opal	NI	Direct
		21	114	22	Opal	NI	Direct
		21	114	23	Opal	NI	Secondary
		21	114	26	Opal	NI	Secondary
		21	114	27	Opal	NI	Secondary
		22	113	6	Graham Reservoir	NI	Direct

TABLE 1-IV (continued)

Site Number	Site Name	Location TN	Location RW	Location Sec.	USGS Quad.	National Register	Type of Current Impact
48LN949 (con't)	Opal Stage Road (con't)	22	113	7	Graham Reservoir	NI	Direct
		22	114	12	Graham Reservoir	NI	Secondary
		22	114	13	Graham Reservoir	NI	Secondary
		22	114	24	Opal/Graham Reservoir	NI	Direct
		22	114	25	Opal	NI	Direct
		22	114	35	Opal	NI	Secondary
		22	114	36	Opal	NI	Direct
		23	113	8	Graham Reservoir	NI	Secondary
		23	113	9	Graham Reservoir	NI	Secondary
		23	113	17	Graham Reservoir	NI	Direct
		23	113	20	Graham Reservoir	NI	Direct
		23	113	29	Graham Reservoir	NI	Direct
		23	113	32	Graham Reservoir	NI	Secondary
		23	114	36	Graham Reservoir	NI	Secondary
		24	113	3	Fontenelle Res. SW	NI	Secondary
		24	113	10	Fontenelle Res. SW	NI	Secondary
		24	113	22	Fontenelle Res. SW	NI	Secondary
		24	113	23	Fontenelle Res. SW	NI	Direct
		25	112	19	Names Hill	NI	Secondary
		25	113	1	Names Hill	NI	Direct
		25	113	2	Names Hill	NI	Direct
		25	113	13	Names Hill	NI	Direct
		26	113	25	Names Hill	NI	Secondary
		26	113	36	Names Hill	NI	Direct
48SU387	Lander Cutoff	29	113	5	Deer Hill	PE	Secondary
		29	113	6	Deer Hill	PE	Secondary
		29	114	1	Deer Hill	PE	Secondary
		29	114	2	Springman Creek	PE	Secondary
		29	114	3	Springman Creek	PE	Secondary
		29	114	4	Springman Creek	PE	Secondary
		29	114	7	Springman Creek	PE	Secondary
		29	114	8	Springman Creek	PE	Secondary

TABLE 1-IV (continued)

Site Number	Site Name	Location			USGS Quad.	National Register	Type of Current Impact
		TN	RW	Sec.			
48SU387 (con't)	Lander Cutoff (con't)	29	114	9	Springman Creek	PE	Secondary
		29	115	12	Springman Creek	PE	Secondary
		29	115	11	Springman Creek/ Wyoming Peak	PE	Secondary
		29	115	10	Wyoming Peak	PE	Secondary
		29	115	15	Wyoming Peak/ Mt. Thompson	PE	Secondary
		29	115	16	Mt. Thompson	PE	Secondary
		29	115	17	Mt. Thompson	PE	Secondary
		29	115	19	Mt. Thompson	PE	Secondary
		29	115	20	Mt. Thompson	PE	Secondary
		29	115	21	Mt. Thompson	PE	Secondary
		30	113	24	Big Piney West	PE	Secondary
		30	113	25	Deer Hill	PE	Secondary
		30	113	26	Deer Hill	PE	Secondary
		30	113	32	Deer Hill	PE	Secondary
		30	113	33	Deer Hill	PE	Secondary
		30	113	34	Deer Hill	PE	Secondary
		30	113	35	Deer Hill	PE	Secondary
48SW827	Oregon Trail (main trail)	19	111	18	Granger	PE	Secondary
		19	111	19	Granger	PE	Direct
		19	111	20	Granger	PE	Direct
		19	111	21	Granger	PE	Secondary
		19	111	28	Granger	PE	Direct
		19	111	29	Granger	PE	Secondary
		21	109	6	Lombard Buttes	PE	Direct
		21	109	8	Lombard Buttes	PE	Direct
		21	109	10	Big Island Bridge	PE	Secondary
		21	109	15	Lombard Buttes	PE	Direct
		21	109	16	Lombard Buttes	PE	Secondary
		21	109	17	Lombard Buttes	PE	Secondary
		21	109	28	Lombard Buttes	PE	Secondary

TABLE 1-IV (continued)

Site Number	Site Name	Location TN	Location RW	Location Sec.	USGS Quad.	National Register	Type of Current Impact
48SW827 (con't)	Oregon Trail (main trail)	21	109	29	Lombard Buttes	PE	Direct
		21	109	31	Lombard Buttes	PE	Secondary
		21	110	1	Lombard Buttes	PE	Secondary
		21	110	12	Lombard Buttes	PE	Direct
		22	109	31	Lombard Buttes	PE	Direct
		23	108	9	Gasson Bridge	PE	Secondary
		23	108	10	Gasson Bridge	PE	Direct
48SW1226	Overland Trail	18	105	5	Kanda	PE	Secondary
		18	105	6	Kanda	PE	Secondary
		18	105	7	Kanda	PE	Direct
		18	106	12	Kanda	PE	Secondary
		19	105	29	Kanda	PE	Direct
		19	105	32	Kanda	PE	Direct
48SW1841	Sublette Cutoff	26	109	1	Teakettle Butte/ Sugar Loaf	PE	Direct
		26	109	2	Sugar Loaf	PE	Secondary
		26	110	2	Oasis Well	PE	Secondary
		26	110	3	Oasis Well	PE	Direct
		26	110	7	Oasis Well	PE	Secondary
		26	110	8	Oasis Well	PE	Direct
48SW3864/ 48SW3869	Bryan to South Pass City and Green River to South Pass City Stage Routes	20	106	1	Pilot Butte	PE	Direct
		20	106	2	Pilot Butte	PE	Direct
		20	106	3	Pilot Butte	PE	Secondary
		21	107	23	Chrisman Ranch	PE	Secondary
		21	107	26	Chrisman Ranch	PE	Direct
		22	107	3	Pittman Well	PE	Secondary
		22	107	10	Pittman Well	PE	Direct
		22	107	15	Pittman Well	PE	Secondary

TABLE 1-IV (continued)

Site Number	Site Name	Location TN	RW	Sec.	USGS Quad.	National Register	Type of Current Impact
48SW4195	Kinney Cutoff	22	109	6	Thoman School	PE	Secondary
		22	109	7	Thoman School	PE	Direct
		22	110	1	Thoman School	PE	Secondary
48SW4197	Slate Creek Cutoff	23	109	5	Twelvemile Sink/ Thoman School	PE	Secondary
		24	109	32	Twelvemile Sink	PE	Secondary

TABLE 1-V

KNOWN PREHISTORIC AND HISTORIC SITES LISTED BY RILEY RIDGE PROJECT FACILITIES

PROPOSED ACTION

Well Field Units

(v.a) North Riley Ridge Unit (AQ) (NRRU)
48SU50, HS15, HS20, HS21, HS22

(v.b) Riley Ridge Unit (RRU) (AQ)
48SU550, SU551

(v.c) Lake Ridge Unit (Ex)
48SU25, SU26, HS9

(v.d) Tip Top Unit (M) (TTU)
48SU38, SU39, SU40, SU41, SU111, SU127, SU253, SU340, SU341, SU353, SU354, SU355

(v.e) Fogarty Creek Unit (E) (FCU)
48SU11, SU128, SU177

(v.f) Sawmill Unit (W)
HS8, HS12, HS16, HS17, HS18, HS19

(v.g) Darby Mt. Unit (AQ)
HS10, HS11

Non-Linear Facilities

(v.h) West Dry Basin Plant Site (Ex)
48SU502, SU503, SU504, SU505

Linear Facilities

(v.i) Railroad spur to Craven Creek site (NWP) (RR-CC)
48LN231, LN232, LN233, LN234, LN235, LN323, LN1048, LN1049, LN1050, LN1051

TABLE 1-V (Continued)

(v.j) Transmission line from NPP to East Dry Basin (AQ+EX) (TL-1, TL-2, TL-EDB)
48LN33, LN232, LN233, LN335, LN414, LN480, LN490, LN491, LN492, LN658, LN743, LN825, LN913, LN914, LN915, LN924, LN1003, LN1099, LN1100, SU74, SU213, SU244, SU258, SU259, SU472, SU474, SU487, SU488, SU498, SU491, SU492

(v.k) Transmission line branch to West Dry Basin (EX) (TL-WDB)
48SU221

(v.l) Transmission line branch to Big Mesa (EX) (TL-BM)
48SU74

(v.m) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)
48LN232, LN233

(v.n) Transmission line from NPP to Craven Creek site (NWP) (TL-N-CC)
48LN134, LN231, LN232, LN233, LN234, LN323, LN528, LN627, LN628, LN629, LN660, LN735, LN739, LN821, LN825, LN826, LN1049, LN1050, LN1051

(v.o) Sour gas trunkline to East Dry Basin (AQ) (SG-EDB-Q)
48SU111, SU195, SU267, SU354

(v.p) Sour gas trunkline to East Dry Basin (W) (SG-EDB-W)
48SU267, SU268, SU269

(v.q) Sour gas trunkline to West Dry Basin (EX) - within well field (SG-WDB)
No sites recorded

(v.r) Sour gas trunkline to Big Mesa (EX) (SG-BM)
48SU127

(v.s) Sour gas trunkline to Craven Creek (NWP) (SG-CC)
48LN33, LN36, LN111, LN236, LN241, LN242, LN300, LN354, LN684, LN1088, LN1097, LN1098, SU38, SU39, SU150

TABLE 1-V (Continued)

(v.t) Sales gas pipeline from Craven Creek site (NWP) (S-CC)
48LN236

(v.u) Combined carbon dioxide and sales gas corridor from East Dry Basin (AQ) to Trailblazer (CS-EDB, CS-1, CS-2, CS-3)
48SU197, SU221, SU386, SW322, SW476, SW966, SW984, SW1525, SW1526, SW1528, SW1529, SW1530, SW1531, SW1532, SW1533, SW1548, SW1550, SW2600, SW2654, SW2655, SW2656, SW2657, SW3035, SW3205, SW3394, SW3655, SW3806, SW3807, SW4044, SW4045, SW4095, SW4096, SW4097, SW4098, SW4099, SW4100, SW4101, SW4102, SW4152, SW4210, SW4309, SW4337, SW4379, SW4380, SW4630, SW5071, SW5105, BLM-1, BLM-2, BLM-3, BLM-4, HS-2

(v.v) Carbon dioxide and sales gas branch from West Dry Basin (EX) (CS-WDB)
No sites recorded

(v.w) Carbon dioxide and sales gas branch from Big Mesa (EX) (CS-BM)
48SU37, SU45, SU46

(v.x) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)
48LN82, LN86, LN127, LN128, LN133, LN144, LN155, LN182, LN183, LN188, LN189, LN190, LN200, LN201, LN286, LN441, LN472, LN477, LN727, LN824, LN925, SW1051, SW1275, SW1441, SW1676, SW2065, SW2066, SW2067, SW2075, SW2314, SW2315, SW2316, SW2327, SW2328, SW2491, SW2492, SW2662, SW3243, SW3244, SW3245, SW3246, SW3247, SW3248, SW3249, SW3250, SW3353, SW3354, SW3355, SW3356, SW3357, SW3359, SW3618, SW3808, HS-1, HS-3

(v.y) Sulfur pipeline from West Dry Basin to loadout (EX) (SP-1, SP-WDB)
48LN33, LN36, LN111, LN300, LN323, LN324, LN325, LN353, LN355, LN356, LN357, LN360, LN1099, LN1100, LN1088, SU38, SU39, SU40, SU41, SU150

(v.z) Sulfur pipeline from East Dry Basin to West Dry Basin (AQ) (SP-EDB-WDB)
No sites recorded

(v.aa) Sulfur pipeline branch to Big Mesa (EX) (SP-BM)
No sites recorded

TABLE 1-V (Continued)

(v.bb) Water pipeline from Green River to Craven Creek (NWP) (W-CC)
48LN140, LN336, LN337, LN428, LN671, LN672, LN674, LN675, LN676, LN749, LN750, LN824, LN1084, HS-4, HS-5, HS-6

(v.cc) Access road to Craven Creek (NWP) (A-CC)
48LN235, LN236

(v.dd) Access road to Big Mesa (EX) (A-BM)
48SU37, SU46, SU353

Component Alternatives

(v.ee) Railroad to West Dry Basin (EX) (RR-WDB)
48SU66, SU222, SU239, SU242, SU267, SW1738, SW2611, SW2617, SW2636, SW2637, SW2638, SW2639, SW2640, SW4112, SW4113, SW4123, SW4301, SW5092, SW5093, SW5094, RB4, RB12, RB13, RB14, RB15, RB16, RB17

(v.ff) Railroad from Craven Creek to Shute Creek (EX) (RR-SC)
48LN34, LN824

(v.gg) West Dry Basin construction camp site (EX) (C-WDB)
No sites recorded

(v.hh) East Dry Basin construction camp site (AQ) (C-EDB)
No sites recorded

(v.ii) Big Mesa construction camp site (EX) (C-BM)
No sites recorded

(v.jj) Buckhorn construction camp site (AQ) (C-BH)
No sites recorded

(v.kk) Shute Creek construction camp site (EX) (C-SC)
48LN376, LN377, LN378, LN379

TABLE 1-V (Continued)

(v.ll) Proposed transmission line from NPP to substation (UP&L)
48LN21, LN31, LN33, LN103, LN219, LN226, LN332, LN333, LN549, LN550, LN551, LN553, LN554, LN557, LN558, LN559, LN560, LN561, LN566, LN567, LN568, LN569, LN570, LN571, LN572, LN573, LN574, LN575, LN576, LN577, LN578, LN579, LN580, LN581, LN582, LN584, LN768, LN769, LN770, LN771, LN774, LN775, LN776, LN777, LN778, LN779, LN780, LN781, LN782, LN783, LN786, LN787, LN794, LN825, LN865, LN879, LN883, LN884, LN885, LN886, LN887, LN888, LN889, LN892, LN894, LN899, LN902, LN903, LN904, LN905, LN906, LN913, LN914, LN915, LN924, LN961, LN1000, LN1013, LN1017, LN1019, SU74, SU213, SU244, SU258, SU259, SU472, SU474, SU487, SU488, SU489, SU490, SU491, SU492, SU493

(v.mm) Proposed transmission line to Shute Creek (Ex) (UP&L)
48LN47, LN48, LN241, LN428, LN501, LN502, LN503, LN674, LN675, LN676, LN919, LN1082, LN1084, LN1097, LN1098, LN1099

(v.nn) Proposed transmission line to Craven Creek (NWP)(UP&L)
48LN232, LN233, LN234, LN235, LN323, LN628, LN629, LN660, LN1048, LN1049, LN1050, LN1051

(v.oo) Proposed transmission line from Big Mesa (Ex) to Buckhorn (AQ) (UP&L)
48SU45, SU46, SU168, SU453, SU454

(v.pp) Proposed transmission line from East Dry Basin to West Dry Basin (UP&L)
48SU195, SU267, SU508

(v.qq) Proposed transmission line from East Dry Basin to substation (UP&L)
No sites recorded

BUCKHORN ALTERNATIVE

Well Field Units

(v.a) North Riley Ridge Unit (AQ) (NRRU)
48SU50, HS15, HS20, HS21, HS22

(v.b) Riley Ridge Unit (RRU) (AQ)
48SU550, SU551

TABLE 1-V (Continued)

(v.c) Lake Ridge Unit (Ex)
48SU25, SU26, HS9

(v.d) Tip Top Unit (M) (TTU)
48SU38, SU39, SU40, SU41, SU111, SU127, SU253, SU340, SU341, SU353, SU354, SU355

(v.e) Fogarty Creek Unit (E) (FCU)
48SU11, SU128, SU177

(v.f) Sawmill Unit (W)
HS8, HS12, HS16, HS17, HS18, HS19

(v.g) Darby Mt. Unit (AQ)
HS10, HS11

Non-linear facilities

(v.h) West Dry Basin Plant Site
48SU502, SU503, SU504, SU505

Linear Facilities

(v.i) Railroad spur to Craven Creek site (NWP) (RR-CC)
48LN231, LN232, LN233, LN234, LN235, LN323, LN1048, LN1049, LN1050, LN1051

(v.j) Transmission line from NPP to Buckhorn (AQ+EX) (TL-1, TL-BH)
48LN33, LN233, LN335, LN414, LN480, LN490, LN491, LN492, LN658, LN743, LN825, LN913, LN914, LN915, LN924, LN1003, LN1099, LN1100, SU74, SU168, SU213, SU244, SU258, SU259, SU453, SU454, SU472, SU474, SU487, SU488, SU490, SU491, SU492

(v.k) Transmission line branch to West Dry Basin (EX) (TL-2, TL-WDB)
No sites recorded

(v.l) Transmission line branch to East Dry Basin (EX) (TL-EDB)
No sites recorded

TABLE 1-V (Continued)

(v.m) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)
48LN232, LN233

(v.n) Transmission line from NPP to Craven Creek site (NWP) (TL-N-CC)
48LN134, LN231, LN232, LN233, LN234, LN323, LN528, LN627, LN628, LN629, LN660, LN735, LN739, LN821, LN825, LN826, LN1049, LN1050, LN1051

(v.o) Sour gas trunkline to Buckhorn (AQ) (SG-BH-Q)
48SU267, SU268, SU269, SU402, SU453, SU454

(v.p) Sour gas trunkline to Buckhorn (W)
48SU267, SU268, SU269, SU402, SU453, SU454

(v.q) Sour gas trunkline to West Dry Basin (Ex) - within well field (SG-WDB)
48SU504, SU505

(v.r) Sour gas trunkline to East Dry Basin (EX) (SG-EDB-E)
48SU195, SU267, SU508

(v.s) Sour gas trunkline to Craven Creek (NWP) (SG-CC)
48LN33, LN36, LN111, LN236, LN241, LN242, LN300, LN354, LN684, LN1088, LN1097, LN1098, SU38, SU39, SU150

(v.t) Sales gas pipeline from Craven Creek site (NWP) (S-CC)
48LN236

(v.u) Combined carbon dioxide and sales gas corridor from West Dry Basin (E) to Trailblazer (CS-WDB, CS-1, CS-2, CS-3)
48SU195, SU221, SU386, SU508, SW322, SW476, SW966, SW984, SW1525, SW1526, SW1528, SW1529, SW1530, SW1531, SW1532, SW1533, SW1548, SW1550, SW2600, SW2654, SW2655, SW2656, SW2657, SW3035, SW3205, SW3394, SW3655, SW3806, SW3807, SW4044, SW4045, SW4095, SW4096, SW4097, SW4098, SW4099, SW4100, SW4101, SW4102, SW4152, SW4210, SW4309, SW4337, SW4379, SW4380, SW4630, SW5071, SW5105, BLM-1, BLM-2, BLM-3, BLM-4, HS-2

(v.v) Carbon dioxide and sales gas branch from Buckhorn (AQ) (CS-BH)
No sites recorded

TABLE 1-V (Continued)

(v.w) Carbon dioxide and sales gas branch from East Dry Basin (EX) (CS-EDB)
No sites recorded

(v.x) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)
48LN82, LN86, LN127, LN128, LN133, LN144, LN155, LN182, LN183, LN188, LN189, LN190, LN200, LN201, LN286, LN441, LN472, LN477, LN727, LN824, LN925, SW1051, SW1275, SW1441, SW1676, SW2065, SW2066, SW2067, SW2075, SW2314, SW2315, SW2316, SW2327, SW2328, SW2491, SW2492, SW2662, SW3243, SW3244, SW3245, SW3246, SW3247, SW3248, SW3249, SW3250, SW3353, SW3354, SW3355, SW3356, SW3357, SW3359, SW3618, SW3808, HS-1, HS-3

(v.y) Sulfur pipeline from East Dry Basin (EX) to loadout (SP-1, SP-2, SP-EDB)
48LN33, LN36, LN111, LN300, LN323, LN324, LN325, LN353, LN355, LN356, LN357, LN360, LN1088, LN1099, LN1100, SU38, SU39, SU40, SU41, SU150

(v.z) Sulfur pipeline from Buckhorn (AQ) (SP-BH)
48LN33, LN36, LN111, LN300, LN323, LN324, LN325, LN353, LN355, LN356, LN357, LN360, LN1089, LN1099, LN1100, SU213, SU244, SU256, SU257, SU453, SU454, SU472, SU474, SU487, SU489, SU490, SU491, SU492, SU493

(v.aa) Water pipeline from Green River to Craven Creek (NWP) (W-CC)
48LN140, LN336, LN337, LN428, LN671, LN672, LN674, LN675, LN676, LN749, LN750, LN824, LN1084, HS-4, HS-5, HS-6

(v.bb) Access road to Craven Creek (NWP) (A-CC)
48LN235, LN236

SHUTE CREEK ALTERNATIVE

Well Field Units

(v.a) North Riley Ridge Unit (AQ) (NRRU)
48SU50, HS-15, HS-20, HS-21, HS22

(v.b) Riley Ridge Unit (RRU) (AQ)
48SU550, SU551

TABLE 1-V (Continued)

(v.c) Lake Ridge Unit (EX)
48SU25, SU26, HS-9

(v.d) Tip Top Unit (M) (TTU)
48SU38, SU39, SU40, SU41, SU111, SU127, SU253, SU340, SU341, SU353, SU354, SU355

(v.e) Fogarty Creek Unit (E) (FCU)
48SU11, SU128, SU177

(v.f) Sawmill Unit (W)
HS-8, HS-12, HS-16, HS-17, HS-18, HS-19

(v.g) Darby Mt. Unit (AQ)
HS-10, HS-11

Non-Linear Facilities

(v.h) Shute Creek (E)
48LN373

Linear Facilities

(v.i) Railroad spur to Craven Creek site (NWP) (RR-CC)
48LN231, LN232, LN233, LN234, LN235, LN323, LN1048, LN1049, LN1050, LN1051

(v.j) Transmission line from NPP to Buckhorn (AQ+EX) (TL-1, TL-BH)
48LN33, LN233, LN335, LN414, LN480, LN490, LN491, LN492, LN658, LN743, LN825, LN913, LN914, LN915, LN924, LN1003, LN1099, LN1100, SU74, SU168, SU213, SU244, SU258, SU259, SU453, SU454, SU472, SU474, SU487, SU488, SU490, SU491, SU492

(v.k) Transmission line branch to Shute Creek (EX) (TL-SC)
48LN34, LN235, LN824

(v.l) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)
48LN232, LN233

TABLE 1-V (Continued)

(v.m) Transmission line from NPP to Craven Creek (NWP) (TL-N-CC)
48LN134, LN231, LN232, LN233, LN234, LN323, LN528, LN627, LN628, LN629, LN660, LN735, LN739, LN821, LN825, LN826, LN1049, LN1050, LN1051

(v.n) Sour gas trunkline to Buckhorn (AQ) (SG-BH)
48SU267, SU268, SU269, SU402, SU453, SU454

(v.o) Sour gas trunkline to Buckhorn (W) (SG-BHW)
48SU267, SU268, SU269, SU402, SU453, SU454

(v.p) Sour gas trunkline to Shute Creek (EX) (SG-SC)
48LN48, LN203, LN204, LN501, N502, LN503, LN504, LN505, LN506, LN507, LN919, LN1082

(v.q) Sour gas trunkline to Craven Creek (NWP) (SG-CC)
48LN33, LN36, LN111, LN236, LN241, LN242, LN300, LN354, LN684, LN1088, LN1097, LN1098, SU38, SU39, SU150

(v.r) Sales gas pipeline from Craven Creek site (NWP) (S-CC)
48LN236

(v.s) Combined carbon dioxide and sales gas corridor from Buckhorn (AQ) to Trailblazer (CS-BH, CS-2, CS-3)
48SW322, SW476, SW984, SW1525, SW1526, SW1528, SW1529, SW1530, SW1531, SW1532, SW1533, SW1548, SW1550, SW2600, SW2654, SW2655, SW2656, SW2657, SW3035, SW3205, SW3394, SW4044, SW4045, SW4095, SW4096, SW4097, SW4098, SW4099, SW4100, SW4101, SW4102, SW4152, SW4309, SW4337, SW4630, SW5071, SW5105, BLM-1, BLM-2, HS-2

(v.t) Carbon dioxide and sales gas branch from Shute Creek (EX) (CS-SC)
48LN146, LN375, SW322, SW348, SW390, SW476, SW897, SW898, SW899, SW902, SW903, SW984, SW1232, SW1247, SW1274, SW1525, SW1526, SW1528, SW1529, SW1530, SW1531, SW1532, SW1533, SW1548, SW1550, SW2654, SW2655, SW2656, SW2657, SW3035, SW3205, SW3394, SW4072, SW4075, SW4095, SW4096, SW4097, SW4098, SW4099, SW4100, SW4101, SW4102, SW4309, SW4337, SW5045, SW5277

TABLE 1-V (Continued)

(v.u) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)
48LN82, LN86, LN127, LN128, LN133, LN144, LN155, LN182, LN183, LN188, LN189, LN190, LN200, LN201, LN286, LN441, LN472, LN477, LN727, LN824, LN925, SW1051, SW1275, SW1441, SW1676, SW2065, SW2066, SW2067, SW2075, SW2314, SW2315, SW2316, SW2327, SW2328, SW2491, SW2492, SW2662, SW3243, SW3244, SW3245, SW3246, SW3247, SW3248, SW3249, SW3250, SW3353, SW3354, SW3355, SW3356, SW3357, SW3359, SW3618, SW3808, HS-1, HS-3

(v.v) Sulfur pipeline from Buckhorn to loadout (AQ) (SP-1, SP-2, SP-BH)
48N33, LN36, LN111, LN300, LN323, LN324, LN325, LN353, LN355, LN356, LN357, LN360, LN1089, LN1099, LN1100, SU213, SU244, SU256, SU257, SU453, SU454, SU472, SU474, SU487, SU488, SU489, SU490, SU491, SU492, SU493

(v.w) Sulfur pipeline branch to Shute Creek (EX) (SP-SC)
48LN34, LN323, LN824

(v.x) Water pipeline from Green River to Craven Creek (NWP)
48LN140, LN336, LN337, LN428, LN671, LN672, LN674, LN675, LN676, LN749, LN750, LN824, LN1084, HS-4, HS-5, HS-6

(v.y) Access road to Craven Creek (NWP) (A-CC)
48LN235, LN236

(v.z) Access road to Shute Creek (EX) (A-SC-W)
No sites recorded

(v.aa) Access road to Shute Creek (EX) (A-SC-S)
48LN97, LN150, LN374, LN378, LN379, LN380, LN387, LN516, LN517, LN681, LN682, LN683, LN817/SW3614, SW1240, SW1241, SW1369, SW1412, SW1414, SW3615, BLM-5, BLM-6, BLM-7, BLM-8, BLM-9, BLM-10, BLM-11

(v.bb) Access road to Shute Creek (EX) (A-SC-N)
48LN336, LN372, LN376, LN377, LN619, LN620, LN621, LN751, LN752, LN919

TABLE 1-V (Continued)

NORTHERN ALTERNATIVE

Well Field Units

(v.a) North Riley Ridge Unit (AQ) (NRRU)
48SU50,HS-15, HS-20, HS-21, HS-22

(v.b) Riley Ridge Unit (RRU) (AQ)
48SU550, SU551

(v.c) Lake Ridge Unit (Ex)
48SU25, SU26, HS-9

(v.d) Tip Top Unit (M) (TTU)
48SU38, SU39, SU40, SU41, SU111, SU127, SU253, SU340, SU341, SU353, SU354, SU355

(v.e) Fogarty Creek Unit (E) (FCU)
48SU11, SU128, SU177

(v.f) Sawmill Unit (W)
HS-8, HS-12, HS-16, HS-17, HS-18, HS-19

(v.g) Darby Mt. Unit (AQ)
HS-10, HS-11

Non-Linear Facilities

(v.h) West Dry Basin Plant Site (Ex)
48SU502, SU503, SU504, SU505

Linear Facilities

(v.i) Transmission line from NPP to West Dry Basin (EX) (TL-1, TL-2, TL-WDB)
48LN33, LN233, LN335, LN414, LN480, LN490, LN491, LN492, LN658, LN743, LN825, LN913, LN914, LN915, LN924, LN1003, LN1099, LN1100, SU74, SU168, SU213, SU221, SU244, SU258, SU259, SU472, SU474, SU487, SU488, SU490, SU491, SU492, SU508

TABLE 1-V (Continued)

(v.j) Transmission line branch to Buckhorn (AQ) (TL-BH)
48SU453, SU454

(v.k) Transmission line branch to Big Mesa (EX) (TL-BM)
48SU74

(v.l) Transmission line branch to East Dry Basin (NWP) (TL-EDB)
No sites recorded

(v.m) Transmission line branch to sulfur loadout (AQ, EX, NWP) (TL-SL)
48LN232, LN233

(v.n) Sour gas trunkline to West Dry Basin (EX) (SG-WDB)
No sites recorded

(v.o) Sour gas trunkline to Buckhorn (AQ) (SG-BH-Q)
48SU267, SU268, SU269, SU402, SU453, SU454

(v.p) Sour gas trunkline to Buckhorn (W) (SG-BH-W)
48SU267, SU268, SU269, SU402, SU453, SU454

(v.q) Sour gas trunkline to Big Mesa (EX) (SG-BM)
48SU127

(v.r) Sour gas trunkline to East Dry Basin (NWP) (SG-EDB-N)
48SU195, SU267, SU508

(v.s) Sales gas and carbon dioxide pipeline from West Dry Basin to Trailblazer (EX) (CS-WDB, CS-1, CS-2, CS-3)
48SU195, SU221, SU386, SU508, SW322, SW476, SW966, SW984, SW1525, SW1526, SW1528, SW1529, SW1530, SW1531, SW1532, SW1533, SW1548, SW1550, SW2600, SW2654, SW2655, SW2656, SW2657, SW3035, SW3205, SW3394, SW3655, SW3806, SW3807, SW4044, SW4045, SW4095, SW4096, SW4097, SW4098, SW4099, SW4100, SW4101, SW4102, SW4152, SW4210, SW4309, SW4337, SW4379, SW4380, SW4630, SW5071, SW5105, BLM-1, BLM-2, BLM-3, BLM-4, HS-2

TABLE 1-V (Continued)

(v.t) Sales gas and carbon dioxide pipeline branch from Buckhorn (AQ) (CS-BH)
No sites recorded

(v.u) Sales gas and carbon dioxide pipeline branch from Big Mesa (EX) (CS-BM)
48SU37, SU45, SU46

(v.v) Carbon dioxide (only) branch from East Dry Basin (NWP) (CS-EDB)
No sites recorded (not mapped -- follows Exxon's corridor)

(v.w) Sales gas pipeline from East Dry Basin (NWP) (S-EDB)
48LN33, LN111, SU38, SU39, SU40, SU41, SU150, SU267

(v.x) Sulfur pipeline from West Dry Basin to loadout (EX+AQ) (SP-1, SP-WDB)
48LN33, LN36, LN111, LN300, LN323, LN324, LN325, LN353, LN355, LN356, LN357, LN360, LN1088, LN1099, LN1100, SU38, SU39, SU40, SU41, SU150

(v.y) Sulfur pipeline branch from Buckhorn (AQ) (SP-BH)
48LN33, LN36, LN111, LN300, LN323, LN324, LN325, LN353, LN355, LN356, LN357, LN360, LN1089, LN1099, LN1100, SU213, SU244, SU256, SU257, SU453, SU454, SU472, SU474, SU487, SU488, SU489, SU490, SU491, SU492, SU493

(v.z) Sulfur pipeline branch from Big Mesa (EX) (SP-BM)
No sites recorded

(v.aa) Sulfur pipeline branch from East Dry Basin (NWP) (SP-EDB-WDB)
48SU195, SU267, SU508

TABLE 2-I

ASSESSMENT OF IMPACT OF RILEY RIDGE PROJECT FACILITIES ON KNOWN POTENTIALLY SIGNIFICANT SITES

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
			PROPOSED ACTION	
Well Field Units				
(i.a) North Riley Ridge Unit (AQ) (NRRU)				
	48SU50	Secondary	Map, record	No National Register evaluation
	HS-15	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-20	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-21	Secondary	None given	No National Register evaluation (no basis on which to assess site's evaluation)
	HS-22	Secondary	None given	No National Register evaluation (no basis on which to assess site's evaluation)
(i.b) Riley Ridge Unit (AQ) (RRU)				
	48SU550	Secondary	Test	Potentially eligible
	48SU551	Secondary	Test	Potentially eligible
(i.c) Lake Ridge Unit				
	48SU25	Unknown	Test, excavate	No National Register evaluation
	48SU26	Unknown	Test, excavate	No National Register evaluation
	HS-9	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.d)	Tip Top Unit (H)			
	48SU39	Secondary	Test	No National Register evaluation
	48SU40	Secondary	Limited excavation	No National Register evaluation
	48SU41	Secondary	Extensive surface collection	No National Register evaluation
	48SU111	Secondary	Avoid	Potentially eligible
	48SU340	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU341	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU353	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU354	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU355	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.e)	Fogarty Creek Unit (E) (FCU)			
	48SU11	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU128	Direct	Monitor	No National Register evaluation
	48SU177	Direct	Avoid or test	No National Register evaluation
(i.f)	Darby Mtn. Unit			
	HS-10	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
HS-11	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.g) Sawmill Unit			
HS-8	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-12	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-16	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-17	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-18	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-19	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

Linear Facilities

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.h) Railroad spur to Craven Creek site (NWP) (RR-CC)			
48LN233	Secondary	Test if further work proposed	Potentially eligible
48LN323	Secondary	Tested (6/80)	Potentially eligible
48LN1051	Direct	Excavate prehistoric component	Determined eligible
(i.i) Transmission line from NPP to East Dry Basin (AQ+EX) (Tl-1, TL-2, TL-EDB)			
48LN233	Secondary	Test if further work proposed	Potentially eligible

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN335	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN480	Direct	Avoid with further evaluation (WWC); collect (AS)	No National Register evaluation
48LN490	Secondary	Test and map before further impact	No National Register evaluation
48LN491	Secondary	Collect, test (AS); no further work (AR)	No National Register evaluation (AS); potentially eligible (AR) (evaluation inconsistent with recommendation)
48LN492	Secondary	Collect, test (AS); avoid or test (AR)	No National Register evaluation (AS); potentially eligible (AR)
48LN825	Direct	Monitor construction	No National Register evaluation
48LN915	Secondary	Test	Not eligible (evaluation inconsistent with recommendation)
48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
48SU74	Secondary	Avoid or test	No National Register evaluation
48SU213	Direct	Map, collect, test	Potentially eligible (local)
48SU244	Secondary	Determine eligibility	Potentially eligible (local)
48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU490	Secondary	Monitor	Potentially eligible (local)
(i.j) Transmission line branch to West Dry Basin (Ex)(TL-WDB)			
48SU221	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
(i.k) Transmission line branch to Big Mesa (EX) (TL-BM)			
48SU74	Secondary	Avoid or test	No National Register evaluation

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.l)	Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)			
	48LN233	Secondary	Test if further work proposed	Potentially eligible
(i.m)	Transmission line from NPP to Craven Creek site (NWP) (TL-N-CC)			
	48LN233	Secondary	Test if further work proposed	Potentially eligible
	48LN323	Secondary	Tested (6/80)	Potentially eligible
	48LN528	Direct	Avoid	Potentially eligible
	48LN627	Direct	Monitor construction only	No National Register evaluation
	48LN628	Secondary	Monitor construction	Not eligible (evaluation inconsistent with recommendation)
	48LN629	Secondary	Monitor construction	Not eligible (evaluation inconsistent with recommendation)
	48LN660	Secondary	Map, collect, test	Potentially eligible
	48LN735	Direct	Map prior to future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN739	Secondary	Avoid, map prior to future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN821	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48LN825	Secondary	Monitor construction	No National Register evaluation
	48LN826	Secondary	Test	No National Register evaluation
	48LN1051	Secondary	Excavate prehistoric component	Determined eligible
(i.n)	Sour gas trunkline to East Dry Basin (AQ) (SG-EDB-Q)			
	48SU111	Unknown	Avoid	Potentially eligible
	48SU354	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.o)	Sour gas trunkline to East Dry Basin (W) (SG-EDB-W)			
	48SU269	Direct	Excavate	Potentially eligible (local)
(i.p)	Sour gas trunkline to Big Mesa (EX) (SG-BM)			
	48SU127	Direct	Avoid or monitor	No National Register evaluation

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.q)	Sour gas trunkline to Craven Creek (NWP) (SG-CC)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN1097	Direct	Excavate	Potentially eligible (local)
	48LN1098	Secondary	Map, monitor, excavate	Not eligible (evaluation inconsistent with recommendation)
	48SU39	Secondary	Test	No National Register evaluation
(i.r)	Combined carbon dioxide and sales gas corridor from East Dry Basin (AQ) to Trailblazer (CS-EDB, CS-1, CS-2, CS-3)			
	48SU221	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW322	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU386	Secondary	Test; monitored during construction	No National Register evaluation
	48SW476	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW966	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW984	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW2600	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48SW2654	Secondary	Map, test	No National Register evaluation
	48SW2655	Secondary	Map, collect	Not eligible (evaluation inconsistent with recommendation)
	48SW2656	Secondary	Map, collect, test hearth	Not eligible (evaluation inconsistent with recommendation)
	48SW2657	Secondary	Test	No National Register evaluation
	48SW3205	Secondary	Place on historic sites inventory	Potentially eligible

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SW3394	Secondary	Avoid, test	No National Register evaluation
48SW3806	Secondary	Avoid or map, collect, test	Potentially eligible
48SW3807	Secondary	Avoid, test	Potentially eligible
48SW4044	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4045	Unknown	None given	No National Register evaluation (no basis on which assess site's significance)
48SW4095	Secondary	Map, test, collect	Potentially eligible (local)
48SW4096	Secondary	Test, collect, excavate	Potentially eligible (local)
48SW4098	Secondary	Test, needs historian's evaluation	No National Register evaluation
48SW4099	Secondary	Map and test	Potentially eligible (local)
48SW4100	Secondary	Test	Potentially eligible (local)
48SW4210	Secondary	Test	No National Register evaluation
48SW4309	Secondary	Map, collect, test	Potentially eligible (local)
48SW4337	Secondary	Map, collect, test	No National Register evaluation
48SW4379	Secondary	Test	Potentially eligible
BLM-1	Secondary	Avoid, excavate	No National Register evaluation
BLM-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-3	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.s)	Carbon dioxide and sales gas branch from Big Mesa (EX) (CS-BM)			
	48SU37	Secondary	None given	No National Register evaluation
	48SU46	Secondary	Collect	No National Register evaluation
(i.t)	Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) C-CC)			
	48LN82	Secondary	Test	No National Register evaluation
	48LN86	Secondary	Avoid or test	No National Register evaluation
	48LN127	Secondary	Partially excavated, 1980; now, avoid or excavate further	Potentially eligible
	48LN133	Secondary	Reroute construction	No National Register evaluation
	48LN183	Secondary	Avoid or monitor	No National Register evaluation
	48LN188	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48LN189	Secondary	Avoid, reroute	Not eligible (evaluation inconsistent with recommendation)
	48LN190	Secondary	Avoid, reroute	Not eligible (evaluation inconsistent with recommendation)
	48LN200	Secondary	Avoid or test	Not eligible (evaluation inconsistent with recommendation)
	48LN477	Secondary	Evaluative testing	No National Register evaluation
	48LN727	Secondary	Relocate well pad	Not eligible (evaluation inconsistent with recommendation)
	48LN824	Secondary	No further work	Potentially eligible
	48SW1051	Secondary	Test, monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW1441	Secondary	Map, collect, test	No National Register evaluation
	48SW2066	Secondary	Avoid or monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW2067	Secondary	Avoid or monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW2315	Secondary	Tested; needs further work	No National Register evaluation
	48SW2491	Secondary	Test	Potentially eligible
	48SW2492	Secondary	Test	No National Register evaluation

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.t) (con't)	Carbon dioxide (con't)			
	48SW2662	Secondary	Tested (1980)	Potentially eligible
	48SW3246	Secondary	Avoid or map and test	Potentially eligible
	48SW3248	Secondary	Avoid or test (AS); tested (AR)	Potentially eligible (AS); not eligible (AR) (latter recommendation cannot be justified given possibly unique nature of site)
	48SW3618	Secondary	Avoid	Potentially eligible
	48SW3808	Secondary	Test	Potentially eligible (local)
	HS-1	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-3	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.u)	Sulfur pipeline from West Dry Basin to loadout (EX) (SP-1, SP-WDB)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN323	Direct	Tested (6/80)	Potentially eligible
	48LN324	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN325	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN353	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
	48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
	48SU39	Secondary	Test	No National Register evaluation
	48SU40	Secondary	Limited excavation	No National Register evaluation
	48SU41	Secondary	Collect	No National Register evaluation

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.v)	Water pipeline from Green River to Craven Creek (NWP) (W-CC)			
	48LN140	Secondary	Avoid	Potentially eligible
	48LN336	Secondary	Monitor	No National Register evaluation
	48LN337	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN428	Secondary	Test dunal areas	Potentially eligible
	48LN672	Secondary	Monitor, avoid or test	No National Register evaluation
	48LN674	Secondary	Avoid	No National Register evaluation
	48LN675	Direct	Avoid; no further work	Not eligible (conflicting recommendations yield no basis on which to assess site's significance)
	48LN676	Secondary	Avoid or test	No National Register evaluation
	48LN824	Secondary	No further work	Potentially eligible
	48LN1084	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-5	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-6	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.w)	Access road to Big Mesa (EX) (A-BM)			
	48SU37	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SU46	Secondary	Collect	No National Register evaluation
48SU353	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
Component Alternatives			
(i.x) Railroad to West Dry Basin (EX) (RR-WDB)			
48SU66	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU239	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
48SU242	Direct	Monitor	Not eligible (evaluation inconsistent with recommendation)
48SW1738	Secondary	Avoid	No National Register evaluation
48SW2611	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW2636	Secondary	Avoid or test further	Potentially eligible
48SW2637	Direct	Further testing necessary	Not eligible (evaluation inconsistent with recommendation)
48SW2638	Secondary	Test	Not eligible (evaluation inconsistent with recommendation)
48SW4112	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4113	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4123	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4301	Secondary	None given	Potentially eligible

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SW5093	Secondary	Tested (1982)	Potentially eligible
	RB-13	Direct	Map, test	Not eligible (evaluation inconsistent with recommendation)
	RB-15	Secondary	Test	No National Register evaluation
	RB-16	Secondary	Test	No National Register evaluation
	RB-17	Secondary	Test	No National Register evaluation
(i.y)	Railroad spur from Craven Creek to Shute Creek (EX) (RR-SC)			
	48LN34	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN824	Secondary	No further work	Potentially eligible (evaluation inconsistent with recommendation)
(i.z)	Shute Creek Construction Camp site (EX) (C-SC)			
	48LN376	Direct	Monitor	No National Register evaluation
	48LN377	Direct	Monitor	No National Register evaluation
	48LN379	Direct	Monitor	No National Register evaluation
(i.aa)	Proposed transmission line from NPP to substation (UP&L)			
	48LN21	Secondary	Photograph, stabilize	No National Register evaluation
	48LN219	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN226	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN332	Secondary	"Excavation not urgently recommended"	No National Register evaluation
	48LN333	Secondary	Test	No National Register evaluation
	48LN573	Secondary	Tested; avoid	Potentially eligible
	48LN579	Secondary	Test	Not eligible (evaluation inconsistent with recommendation)

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN768	Secondary	Test specified areas	Potentially eligible
48LN780	Secondary	Tested; excavate	Potentially eligible
48LN786	Secondary	Tested; avoid	Potentially eligible
48LN787	Secondary	Tested; avoid	Potentially eligible
48LN825	Secondary	Monitor construction	No National Register evaluation
48LN865	Secondary	Avoid	No National Register evaluation
48LN905	Secondary	Investigate site's history	Not eligible (evaluation inconsistent with recommendation)
48LN915	Secondary	Test, monitor	Not eligible (evaluation inconsistent with recommendation)
48LN961	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN1000	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN1013	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN1017	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN1019	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU74	Secondary	Avoid or test	No National Register evaluation
48SU213	Direct	Map, collect, test	Potentially eligible (local)
48SU244	Secondary	Determine eligibility	Potentially eligible (local)
48SU472	Secondary	Detailed recording	Not eligible ("further analysis may alter status")
48SU474	Secondary	Detailed recording	Not eligible (evaluation inconsistent with recommendation)
48SU489	Secondary	Monitor	Not eligible ("provisional" evaluation)
48SU493	Secondary	Avoid	Potentially eligible

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.bb)	Proposed transmission line to Shute Creek (EX) (UP&L)			
	48LN47	Secondary	Monitor	No National Register evaluation
	48LN428	Secondary	Test dunal areas	Potentially eligible
	48LN502	Secondary	Map, monitor future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN674	Secondary	Avoid	No National Register evaluation
	48LN675	Secondary	Avoid, no further work	Not eligible (conflicting recommendations, one of which is inconsistent with evaluation)
	48LN676	Secondary	Avoid or test	No National Register evaluation
	48LN919	Secondary	Avoid	Potentially eligible
	48LN1082	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN1084	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN1097	Secondary	Excavate	Potentially eligible (local)
	48LN1098	Secondary	Map, monitor, excavate	Not eligible (evaluation inconsistent with recommendation)
	48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
(i.cc)	Proposed transmission line to Craven Creek (NWP) (UP&L)			
	48LN233	Secondary	Test	Potentially eligible
	48LN323	Direct	Tested (1980)	Potentially eligible
	48LN628	Direct	Monitor	Not eligible (evaluation inconsistent with recommendation)
	48LN629	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
	48LN660	Secondary	Map, collect, test	Potentially eligible
	48LN1051	Secondary	Excavate prehistoric component	Determined eligible

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.dd)	Proposed transmission line from Big Mesa (EX) to Buckhorn (AQ) (UP&L)			
	48SU46	Secondary	Surface collect	No National Register evaluation
	48SU168	Secondary	Avoid, test	Potentially eligible
	48SU453	Secondary	No further work for recorder's project	Potentially eligible
	48SU454	Secondary	Tested	Potentially eligible
(i.ee)	Proposed transmission line from East Dry Basin to West Dry Basin (UP&L)			
	48SU508	Secondary	Collect data, fully record site	Potentially eligible (local)

BUCKHORN ALTERNATIVE

Well Field Units

(i.a)	North Riley Ridge Unit (AQ) (NRRU)			
	48SU50	Secondary	Map, record	No National Register evaluation
	HS-15	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-20	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-21	Secondary	None given	No National Register evaluation (no basis on which to assess site's evaluation)
	HS-22	Secondary	None given	No National Register evaluation (no basis on which to assess site's evaluation)
(i.b)	Riley Ridge Unit (AQ) (RRU)			
	48SU550	Secondary	Test	Potentially eligible
	48SU551	Secondary	Test	Potentially eligible

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.c) Lake Ridge Unit				
	48SU25	Unknown	Test, excavate	No National Register evaluation
	48SU26	Unknown	Test, excavate	No National Register evaluation
	HS-9	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.d) Tip Top Unit (M)				
	48SU39	Secondary	Test	No National Register evaluation
	48SU40	Secondary	Limited excavation	No National Register evaluation
	48SU41	Secondary	Extensive surface collection	No National Register evaluation
	48SU111	Secondary	Avoid	Potentially eligible
	48SU340	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU341	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU353	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU354	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU355	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.e) Fogarty Creek Unit (E) (FCU)				
	48SU11	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SU128	Direct	Monitor	No National Register evaluation
	48SU177	Direct	Avoid or test	No National Register evaluation
(i.f)	Darby Mtn. Unit			
	HS-10	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-11	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.g)	Sawmill Unit			
	HS-8	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-12	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-16	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-17	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-18	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-19	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

Linear Facilities

(i.h) Railroad spur to Craven Creek site (NWP) (RR-CC)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN233	Secondary	Test if further work proposed	Potentially eligible
48LN323	Secondary	Tested (6/80)	Potentially eligible
48LN1051	Direct	Excavate prehistoric component	Determined eligible

(i.i) Transmission line from NPP to Buckhorn (AQ+EX) (TL-1, TL-BH)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN233	Secondary	Test if further work proposed	Potentially eligible
48LN335	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN480	Direct	Avoid until further evaluation	No National Register evaluation
48LN490	Secondary	Test and map future impact	No National Register evaluation
48LN491	Secondary	Collect, test (AS); no further work (AR)	No National Register evaluation (AS); potentially eligible (AR)
48LN492	Secondary	Collect and test	No National Register evaluation
48LN825	Direct	Monitor construction	No National Register evaluation
48LN915	Secondary	Test	Not eligible (evaluation inconsistent with recommendation)
48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
48SU74	Secondary	Avoid or test	No National Register evaluation
48SU168	Secondary	Avoid; test prior to any impact	Potentially eligible
48SU213	Direct	Map, collect, test	Potentially eligible (local)
48SU244	Secondary	Determine eligibility	Potentially eligible (local)
48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU490	Secondary	Monitor	Potentially eligible

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.j)	Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)			
	48LN233	Secondary	Test	Potentially eligible
(i.k)	Transmission line from NPP to Craven Creek site (NWP) (TL-N-CC)			
	48LN233	Secondary	Test if further work proposed	Potentially eligible
	48LN323	Secondary	Tested (6/80)	Potentially eligible
	48LN528	Direct	Avoid	Potentially eligible
	48LN627	Direct	Monitor construction only	No National Register evaluation
	48LN628	Secondary	Monitor construction	Not eligible (evaluation inconsistent with recommendation)
	48LN629	Secondary	Monitor construction	Not eligible (evaluation inconsistent with recommendation)
	48LN660	Secondary	Map, collect, test	Potentially eligible
	48LN735	Direct	Map prior to future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN739	Secondary	Avoid, map prior to future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN821	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48LN825	Secondary	Monitor construction	No National Register evaluation
	48LN826	Secondary	Test	No National Register evaluation
	48LN1051	Secondary	Excavate prehistoric component	Determined eligible
(i.l)	Sour gas trunkline to Buckhorn (AQ) (SG-BH-Q)			
	48SU269	Direct	Excavate	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
(i.m)	Sour gas trunkline to Buckhorn (W) (SG-BH-W)			
	48SU269	Direct	Excavate	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
(i.n)	Sour gas trunkline to East Dry Basin (Ex) (SG-EDB-E)			
	48SU508	Secondary	Record, collect	Potentially eligible (local)
(i.o)	Sour gas trunkline to Craven Creek (NWP) (SG-CC)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN1097	Direct	Excavate	Potentially eligible (local)
	48LN1098	Secondary	Map, monitor, excavate	Not eligible (evaluation inconsistent with recommendation)
	48SU39	Secondary	Test	No National Register evaluation
(i.p)	Combined carbon dioxide and sales gas corridor from West Dry Basin (EX) to Trailblazer (CS-WDB, CS-1, CS-2, CS-3)			
	48SU221	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
	48SU386	Secondary	Test	No National Register evaluation
	48SU508	Secondary	Record	Potentially eligible (local)
	48SW322	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW476	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW966	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW984	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW2600	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48SW2654	Secondary	Map, test	No National Register evaluation

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SW2655	Secondary	Map, collect	Not eligible (evaluation inconsistent with recommendation)
48SW2656	Secondary	Map, collect, test hearth	Not eligible (evaluation inconsistent with recommendation)
48SW2657	Secondary	Test	No National Register evaluation
48SW3205	Secondary	Place on historic site inventory	Potentially eligible
48SW3394	Secondary	Avoid, test	No National Register evaluation
48SW3806	Secondary	Avoid or map, test	Potentially eligible
48SW3807	Secondary	Avoid, test	Potentially eligible
48SW4044	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4045	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4095	Secondary	Map, test, collect	Potentially eligible (local)
48SW4096	Secondary	Test, collect, excavate	Potentially eligible (local)
48SW4098	Secondary	Test, needs historian's evaluation	No National Register evaluation
48SW4099	Secondary	Map and test	Potentially eligible (local)
48SW4100	Secondary	Test	Potentially eligible (local)
48SW4210	Secondary	Test	No National Register evaluation
48SW4309	Secondary	Map, collect, test	Potentially eligible (local)
48SW4337	Secondary	Map, collect, test	No National Register evaluation
48SW4379	Secondary	Test	Potentially eligible
BLM-1	Secondary	Avoid, excavate	No National Register evaluation
BLM-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-3	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
BLM-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.g) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)			
48LN82	Secondary	Test	No National Register evaluation
48LN86	Secondary	Avoid or test	No National Register evaluation
48LN127	Secondary	Partially excavated, 1980; now, avoid or excavate further	Potentially eligible
48LN133	Secondary	Reroute construction	No National Register evaluation
48LN183	Secondary	Avoid or monitor	No National Register evaluation
48LN188	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
48LN189	Secondary	Avoid, reroute	Not eligible (evaluation inconsistent with recommendation)
48LN190	Secondary	Avoid, reroute	Not eligible (evaluation inconsistent with recommendation)
48LN200	Secondary	Avoid or test	Not eligible (evaluation inconsistent with recommendation)
48LN477	Secondary	Evaluative testing	No National Register evaluation
48LN727	Secondary	Relocate well pad	Not eligible (evaluation inconsistent with recommendation)
48LN824	Secondary	No further work	Potentially eligible
48SW1051	Secondary	Test, monitor	Not eligible (evaluation inconsistent with recommendation)
48SW1441	Secondary	Map, collect, test	No National Register evaluation
48SW2066	Secondary	Avoid or monitor	Not eligible (evaluation inconsistent with recommendation)
48SW2067	Secondary	Avoid or monitor	Not eligible (evaluation inconsistent with recommendation)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SW2315	Secondary	Tested; needs further work	No National Register evaluation
48SW2491	Secondary	Test	Potentially eligible
48SW2492	Secondary	Test	No National Register evaluation
48SW2662	Secondary	Tested (1980)	Potentially eligible
48SW3246	Secondary	Avoid or map and test	Potentially eligible
48SW3248	Secondary	Avoid or test (AS); tested (AR)	Potentially eligible (AS); not eligible (AR) (latter recommendation cannot be justified given possibly unique nature of site)
48SW3618	Secondary	Avoid	Potentially eligible
48SW3808	Secondary	Test	Potentially eligible (local)
HS-1	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-3	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.r) Sulfur pipeline from East Dry Basin (EX) to loadout (SP-1, SP-2, SP-EDB)			
48LN300	Secondary	Avoid	Determined eligible
48LN323	Direct	Tested (6/80)	Potentially eligible
48LN324	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN325	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN353	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN1099	Secondary	Avoid, excavate	Potentially eligible (local)
48LN1100	Direct	Avoid, excavate	Potentially eligible (local)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SU39	Secondary	Test	No National Register evaluation
48SU40	Secondary	Limited excavation	No National Register evaluation
48SU41	Secondary	Collect	No National Register evaluation
(i.s) Sulfur pipeline from Buckhorn (AQ) (SP-BH)			
48LN300	Secondary	Avoid	Determined eligible
48LN323	Direct	Tested (6/80)	Potentially eligible
48LN324	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN325	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN353	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48LN1099	Secondary	Avoid, excavate	Potentially eligible (local)
48LN1100	Direct	Avoid, excavate	Potentially eligible (local)
48SU213	Secondary	Map, test	Potentially eligible
48SU244	Secondary	Determine eligibility	Potentially eligible (local)
48SU257	Secondary	Test	Potentially eligible (local)
48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU489	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
48SU490	Secondary	Monitor	Potentially eligible
48SU493	Secondary	Avoid	Potentially eligible

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.t)	Water pipeline from Green River to Craven Creek (NWP) (W-CC)			
	48LN140	Secondary	Avoid	Potentially eligible
	48LN336	Secondary	Monitor	No National Register evaluation
	48LN337	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN428	Secondary	Test dunal areas	Potentially eligible
	48LN672	Secondary	Monitor, avoid or test	No National Register evaluation
	48LN674	Secondary	Avoid	No National Register evaluation
	48LN675	Direct	Avoid, no further work	Not eligible (conflicting recommendations yield no basis on which to assess site's significance)
	48LN676	Secondary	Avoid or test	No National Register evaluation
	48LN824	Secondary	No further work	Potentially eligible
	48LN1084	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-5	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-6	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

SHUTE CREEK ALTERNATIVE

Well Field Units

(i.a) North Riley Ridge Unit (AQ) (NRRU)

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SU50	Secondary	Map, record	No National Register evaluation
	HS-15	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-20	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-21	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-22	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.b)	Riley Ridge Unit (AQ) (RRU)			
	48SU550	Secondary	Test	Potentially eligible
	48SU551	Secondary	Test	Potentially eligible
(i.c)	Lake Ridge Unit			
	48SU25	Unknown	Test, excavate	No National Register evaluation
	48SU26	Unknown	Test, excavate	No National Register evaluation
	HS-9	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.d)	Tip Top Unit (M)			
	48SU39	Secondary	Test	No National Register evaluation
	48SU40	Secondary	Limited excavation	No National Register evaluation
	48SU41	Secondary	Extensive surface collection	No National Register evaluation
	48SU111	Secondary	Avoid	Potentially eligible
	48SU340	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SU341	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU353	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU354	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU355	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.e)	Fogarty Creek Unit (E) (FCU)			
	48SU11	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU128	Direct	Monitor	No National Register evaluation
	48SU177	Direct	Avoid or test	No National Register evaluation
(i.f)	Darby Mtn. Unit			
	HS-10	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-11	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.g)	Sawmill Unit			
	HS-8	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
HS-12	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-16	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-17	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-18	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-19	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

Non-Linear Facilities

(i.h) Shute Creek (E)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN373	Direct	Monitor	No National Register evaluation

Linear Facilities

(i.i) Railroad spur to Craven Creek site (NWP) (RR-CC)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN233	Secondary	Test if further work proposed	Potentially eligible
48LN323	Secondary	Tested (6/80)	Potentially eligible
48LN1051	Direct	Excavate prehistoric component	Determined eligible

(i.j) Transmission line from NPP to Buckhorn (AQ+EX) (TL-1, TL-BH)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN233	Secondary	Test if further work proposed	No National Register evaluation
48LN335	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN480	Direct	Avoid until further evaluation	No National Register evaluation
48LN490	Secondary	Test and map future impact	No National Register evaluation
48LN491	Secondary	Collect, test (AS); no further work (AR)	No National Register evaluation (AS); potentially eligible (AR)
48LN492	Secondary	Collect and test	No National Register evaluation
48LN825	Direct	Monitor construction	No National Register evaluation
48LN915	Secondary	Test	Not eligible (evaluation inconsistent with recommendation)
48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
48SU74	Secondary	Avoid or test	No National Register evaluation
48SU168	Secondary	Avoid; test prior to any impact	Potentially eligible
48SU213	Direct	Map, collect, test	Potentially eligible (local)
48SU244	Secondary	Determine eligibility	Potentially eligible (local)
48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU490	Secondary	Monitor	Potentially eligible (local)
(i.k) Transmission line branch to Shute Creek (EX) (TL-SC)			
48LN34	Secondary	None given	No National Register evaluation
48LN824	Secondary	No further work	Potentially eligible (evaluation inconsistent with recommendation)
(i.l) Transmission line branch to sulfur loadout (AQ+EX) (TL-SL)			
48LN233	Secondary	Test	Potentially eligible

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.m)	Transmission line from NPP to Craven Creek (NWP) (TL-N-CC)			
	48LN233	Secondary	Test if further work proposed	Potentially eligible
	48LN323	Secondary	Tested (6/80)	Potentially eligible
	48LN528	Direct	Avoid	Potentially eligible
	48LN627	Direct	Monitor construction only	No National Register evaluation
	48LN628	Secondary	Monitor construction	Not eligible (evaluation inconsistent with recommendation)
	48LN629	Secondary	Monitor construction	Not eligible (evaluation inconsistent with recommendation)
	48LN660	Secondary	Map, collect, test	Potentially eligible
	48LN735	Direct	Map prior to future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN739	Secondary	Avoid, map prior to future impact	Not eligible (evaluation inconsistent with recommendation)
	48LN821	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48LN825	Secondary	Monitor construction	No National Register evaluation
	48LN826	Secondary	Test	No National Register evaluation
	48LN1051	Secondary	Excavate prehistoric component	Determined eligible
(i.n)	Sour gas trunkline to Buckhorn (AQ) (SG-BH)			
	48SU269	Direct	Excavate	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
(i.o)	Sour gas trunkline to Buckhorn (W) (SG-BHW)			
	48SU269	Direct	Excavate	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.p)	Sour gas trunkline to Shute Creek (EX) (SG-SC)			
	48LN204	Secondary	Monitored (1980)	No National Register evaluation
	48LN502	Direct	Map, monitor future work	Not eligible (evaluation inconsistent with recommendation)
	48LN507	Secondary	Avoid (access rerouted)	Potentially eligible
	48LN919	Secondary	Avoid	Potentially eligible
	48LN1082	Secondary	None given	No National Register evaluation
(i.q)	Sour gas trunkline to Craven Creek (NWP) (SG-CC)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN1097	Direct	Excavate	Potentially eligible (local)
	48LN1098	Secondary	Map, monitor, excavate	Not eligible (evaluation inconsistent with recommendation)
	48SU39	Secondary	Test	No National Register evaluation
(i.r)	Combined carbon dioxide and sales gas corridor from Buckhorn (AQ) to Trailblazer (CS-BH, CS-2, CS-3)			
	48SW322	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW476	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW984	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SW2600	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
	48SW2654	Secondary	Map, test	No National Register evaluation
	48SW2655	Secondary	Map, collect	Not eligible (evaluation inconsistent with recommendation)
	48SW2656	Secondary	Map, collect, test	Not eligible (evaluation inconsistent with recommendation)
	48SW2657	Secondary	Test	No National Register evaluation

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SW3205	Secondary	Place on historic sites inventory	Potentially eligible
48SW3394	Secondary	Avoid, test	No National Register evaluation
48SW4044	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4045	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4095	Secondary	Map, test, collect	Potentially eligible (local)
48SW4096	Secondary	Test, collect, excavate	Potentially eligible (local)
48SW4098	Secondary	Test, needs historian's evaluation	No National Register evaluation
48SW4099	Secondary	Map and test	Potentially eligible (local)
48SW4100	Secondary	Test	Potentially eligible (local)
48SW4309	Secondary	Map, collect, test	Potentially eligible (local)
48SW4337	Secondary	Map, collect, test	No National Register evaluation
BLM-1	Secondary	Avoid, excavate	No National Register evaluation
BLM-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-3	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.s) Carbon dioxide and sales gas branch from Shute Creek (EX) (CS-SC)			
48LN375	Unknown	Monitor	No National Register evaluation
48SW322	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW348	Secondary	"Low priority"	No National Register evaluation
48SW390	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW476	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW897	Secondary	Monitor	No National Register evaluation
48SW898	Secondary	Monitor	No National Register evaluation
48SW899	Secondary	Monitor	No National Register evaluation
48SW902	Secondary	Map, monitor	No National Register evaluation
48SW903	Unknown	Map, monitor	No National Register evaluation
48SW984	Secondary	None given	No National Register evaluation
48SW1232	Secondary	Reroute	No National Register evaluation
48SW1247	Secondary	Monitor	No National Register evaluation
48SW2654	Secondary	Map, test	No National Register evaluation
48SW2655	Secondary	Map, collect	Not eligible (evaluation inconsistent with recommendation)
48SW2656	Secondary	Map, collect, test hearth	Not eligible (evaluation inconsistent with recommendation)
48SW2657	Secondary	Test	No National Register evaluation
48SW3205	Secondary	Place on historic sites inventory	Potentially eligible
48SW3394	Secondary	Avoid, test	No National Register evaluation
48SW4072	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SW4075	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4095	Secondary	Map, test, collect	Potentially eligible (local)
48SW4096	Secondary	Test, collect, excavate	Potentially eligible (local)
48SW4098	Secondary	Test, needs historian's evaluation	No National Register evaluation
48SW4099	Secondary	Map and test	Potentially eligible (local)
48SW4100	Secondary	Test	Potentially eligible (local)
48SW4309	Secondary	Map, collect, test	Potentially eligible (local)
48SW4337	Secondary	Map, collect, test	No National Register evaluation
48SW5277	Secondary	Test	No National Register evaluation
(i.t) Carbon dioxide pipeline from Craven Creek site to Mapco (NWP) (C-CC)			
48LN82	Secondary	Test	No National Register evaluation
48LN86	Secondary	Avoid or test	No National Register evaluation
48LN127	Secondary	Partially excavated, 1980; avoid or excavate further	Potentially eligible
48LN133	Secondary	Reroute construction	No National Register evaluation
48LN183	Secondary	Avoid or monitor	No National Register evaluation
48LN188	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
48LN189	Secondary	Avoid, reroute	Not eligible (evaluation inconsistent with recommendation)
48LN190	Secondary	Avoid, reroute	Not eligible (evaluation inconsistent with recommendation)
48LN200	Secondary	Avoid or test	Not eligible (evaluation inconsistent with recommendation)
48LN477	Secondary	Evaluative testing	No National Register evaluation
48LN727	Secondary	Relocate well pad	Not eligible (evaluation inconsistent with recommendation)
48LN824	Secondary	No further work	Potentially eligible

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SW1051	Secondary	Test, monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW1441	Secondary	Map, collect, test	No National Register evaluation
	48SW2066	Secondary	Avoid or monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW2067	Secondary	Avoid or monitor	Not eligible (evaluation inconsistent with recommendation)
	48SW2315	Secondary	Tested, needs further work	No National Register evaluation
	48SW2491	Secondary	Test	Potentially eligible
	48SW2492	Secondary	Test	No National Register evaluation
	48SW2662	Secondary	Tested (1980)	Potentially eligible
	48SW3246	Secondary	Avoid or map and test	Potentially eligible
	48SW3248	Secondary	Avoid or test (AS); tested (AR)	Potentially eligible (AS); not eligible (AR) (latter recommendation cannot be justified given possibly unique nature of site)
	48SW3618	Secondary	Avoid	Potentially eligible
	48SW3808	Secondary	Test	Potentially eligible (local)
(i.u)	Sulfur pipeline from Buckhorn to loadout (AQ) (SP-1, SP-2, SP-BH)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN323	Direct	Tested (6/80)	Potentially eligible
	48LN324	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN325	Unknown	None given	No National Register evaluatior (no basis on which to assess site's significance)
	48LN353	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
	48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
	48SU213	Secondary	Map, test	Potentially eligible
	48SU244	Secondary	Determine eligibility	Potentially eligible (local)
	48SU257	Secondary	Test	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation
	48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
	48SU489	Secondary	Monitor	Not eligible(?)(evaluation inconsistent with recommendation)
	48SU490	Secondary	Monitor	Potentially eligible
	48SU493	Secondary	Avoid	Potentially eligible
(i.v)	Sulfur pipeline branch to Shute Creek (EX) (SP-SC)			
	48LN34	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN323	Secondary	Tested (6/80)	Potentially eligible
	48LN824	Secondary	No further work	Potentially eligible (evaluation inconsistent with recommendation)
(i.w)	Water pipeline from Green River to Craven Creek (NWP)			
	48LN140	Secondary	Avoid	Potentially eligible
	48LN336	Secondary	Monitor	No National Register evaluation
	48LN337	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48LN428	Secondary	Test dunal areas	Potentially eligible
48LN672	Secondary	Monitor, avoid or test	No National Register evaluation
48LN674	Secondary	Avoid	No National Register evaluation
48LN675	Direct	Avoid; no further work	Not eligible (conflicting recommendations yield no basis on which to assess site's significance)
48LN676	Secondary	Avoid or test	No National Register evaluation
48LN824	Secondary	No further work	Potentially eligible
48LN1084	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-5	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
HS-6	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.x) Access road to Shute Creek (EX) (A-SC-S)			
48LN374	Secondary	Monitor	No National Register evaluation
48LN379	Secondary	Monitor	No National Register evaluation
48LN380	Direct	Test	No National Register evaluation
48LN387	Direct	Monitor	No National Register evaluation
48LN682	Secondary	Avoid	No National Register evaluation
48LN683	Secondary	Avoid	No National Register evaluation
48SW1241	Secondary	Avoid, test	No National Register evaluation
48SW1369	Secondary	Resurvey, map	No National Register evaluation
48SW1412	Secondary	Test	No National Register evaluation

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
BLM-5	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-6	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-7	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-8	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-9	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-10	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
BLM-11	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.y) Access road to Shute Creek (EX) (A-SC-N)			
48LN336	Secondary	Monitor	No National Register evaluation
48LN376	Direct	Monitor	No National Register evaluation
48LN377	Direct	Monitor	No National Register evaluation
48LN619	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
48LN620	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
48LN621	Secondary	Avoid, test	Potentially eligible
48LN919	Secondary	Avoid	Potentially eligible

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
			NORTHERN ALTERNATIVE	
Well Field Units				
(i.a)	North Riley Ridge Unit (AQ) (NRRU)			
	48SU50	Secondary	Map, record	No National Register evaluation
	HS-15	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-20	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-21	Secondary	None given	No National Register evaluation (no basis on which to assess site's evaluation)
	HS-22	Secondary	None given	No National Register evaluation (no basis on which to assess site's evaluation)
(i.b)	Riley Ridge Unit (AQ) (RRU)			
	48SU550	Secondary	Test	Potentially eligible
	48SU551	Secondary	Test	Potentially eligible
(i.c)	Lake Ridge Unit			
	48SU25	Unknown	Test, excavate	No National Register evaluation
	48SU26	Unknown	Test, excavate	No National Register evaluation

TABLE 2-I (continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
HS-9	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.d) Tip Top Unit (M)			
48SU39	Secondary	Test	No National Register evaluation
48SU40	Secondary	Limited excavation	No National Register evaluation
48SU41	Secondary	Extensive surface collection	No National Register evaluation
48SU111	Secondary	Avoid	Potentially eligible
48SU340	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU341	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU353	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU354	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU355	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.e) Fogarty Creek Unit (E) (FCU)			
48SU11	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SU128	Direct	Monitor	No National Register evaluation
48SU177	Direct	Avoid or test	No National Register evaluation

TABLE 2-I (continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.f)	Darby Mtn. Unit			
	HS-10	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-11	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.g.)	Sawmill Unit			
	HS-8	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-12	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-16	Direct	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-17	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-18	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-19	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
Linear Facilities				
(i.h)	Transmission line from NPP to West Dry Basin (EX) (TL-1, TL-2, TL-WDB)			
	48LN233	Secondary	Test	Potentially eligible
	48LN335	Secondary	None given	No National Register evaluation (no basis on which to assess site's siginificance)

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48LN480	Direct	Avoid until further evaluation	No National Register evaluation
	48LN490	Secondary	Test and map	No National Register evaluation
	48LN491	Secondary	Collect, test (AS); no further work (AR)	No National Register evaluation (AS); potentially eligible (AR)
	48LN492	Secondary	Collect and test (AS); avoid or test (AR)	No National Register evaluation (AS); potentially eligible (AR)
	48LN825	Direct	Monitor	No National Register evaluation
	48LN915	Secondary	Test	Not eligible (evaluation inconsistent with recommendation)
	48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
	48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
	48SU74	Secondary	Avoid or test	No National Register evaluation
	48SU168	Secondary	Avoid and test	Potentially eligible
	48SU213	Direct	Map, collect, test	Potentially eligible (local)
	48SU221	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
	48SU244	Secondary	Determine eligibility	Potentially eligible (local)
	48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
	48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
	48SU490	Secondary	Monitor	Potentially eligible (local)
	48SU508	Secondary	Record, collect	Potentially eligible (local)
(i.i)	Transmission line branch to Buckhorn (AQ) (TL-BH)			
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
(i.j)	Transmission line branch to Big Mesa (EX) (TL-BM)			
	48SU74	Secondary	Avoid or test	No National Register evaluation

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.k)	Transmission line branch to sulfur loadout (AQ, EX, NWP) (TL-SL)			
	48LN233	Secondary	Test if further work proposed	Potentially eligible
(i.l)	Sour gas trunkline to Buckhorn (AQ) (SG-BH-Q)			
	48SU269	Direct	Excavate	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
(i.m)	Sour gas trunkline to Buckhorn (W) (SG-BH-W)			
	48SU269	Direct	Excavate	Potentially eligible (local)
	48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
	48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
(i.n)	Sour gas trunkline to Big Mesa (EX) (SG-BM)			
	48SU127	Direct	Avoid or monitor	No National Register evaluation
(i.o)	Sour gas trunkline to East Dry Basin (NWP) (SG-EDB-N)			
	48SU508	Secondary	Record	Potentially eligible (local)
(i.p)	Sales gas and carbon dioxide pipeline from West Dry Basin to Trailblazer (EX) (CS-WDB, CS-1, CS-2, CS-3)			
	48SU221	Secondary	Monitor	Not eligible (evaluation inconsistent with recommendation)
	48SU386	Secondary	Test	No National Register evaluation
	48SU508	Secondary	Record	Potentially eligible (local)
	48SW322	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SW476	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW966	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW984	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW2600	Secondary	Avoid	Not eligible (evaluation inconsistent with recommendation)
48SW2654	Secondary	Map, test	No National Register evaluation
48SW2655	Secondary	Map, collect	Not eligible (evaluation inconsistent with recommendation)
48SW2656	Secondary	Map, collect, test hearth	Not eligible (evaluation inconsistent with recommendation)
48SW2657	Secondary	Test	No National Register evaluation
48SW3205	Secondary	Place on historic sites inventory	Potentially eligible
48SW3394	Secondary	Avoid, test	No National Register evaluation
48SW3806	Secondary	Avoid or map, test	Potentially eligible
48SW3807	Secondary	Avoid, test	Potentially eligible
48SW4044	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4045	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
48SW4095	Secondary	Map, test, collect	Potentially eligible (local)
48SW4096	Secondary	Test, collect, excavate	Potentially eligible (local)
48SW4098	Secondary	Test, needs historian's evaluation	No National Register evaluation

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
	48SW4099	Secondary	Map and test	Potentially eligible (local)
	48SW4100	Secondary	Test	Potentially eligible (local)
	48SW4210	Secondary	Test	No National Register evaluation
	48SW4309	Secondary	Map, collect, test	Potentially eligible (local)
	48SW4337	Secondary	Map, collect, test	No National Register evaluation
	48SW4379	Secondary	Test	Potentially eligible
	BLM-1	Secondary	Avoid, excavate	No National Register evaluation
	BLM-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	BLM-3	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	BLM-4	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	HS-2	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
(i.q)	Sales gas and carbon dioxide branch from Big Mesa (EX) (CS-BM)			
	48SU37	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48SU46	Secondary	Collect	No National Register evaluation
(i.r)	Sales gas pipeline from East Dry Basin (NWP) (S-EDB)			
	48SU39	Direct	Test	No National Register evaluation
	48SU40	Secondary	Limited excavation	No National Register evaluation
	48SU41	Secondary	Extensive surface collection	No National Register evaluation

TABLE 2-I (Continued)

	Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
(i.s)	Sulfur pipeline from West Dry Basin to loadout (EX+AQ) (SP-1, SP-WDB)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN323	Direct	Tested (6/80)	Potentially eligible
	48LN324	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN325	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN353	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
	48LN1100	Direct	Avoid or excavate	Potentially eligible (local)
	48SU39	Secondary	Test	No National Register evaluation
	48SU40	Secondary	Limited excavation	No National Register evaluation
	48SU41	Secondary	Collect	No National Register evaluation
(i.t)	Sulfur pipeline branch from Buckhorn (AQ) (SP-BH)			
	48LN300	Secondary	Avoid	Determined eligible
	48LN323	Direct	Tested (6/80)	Potentially eligible
	48LN324	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN325	Unknown	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN353	Secondary	None given	No National Register evaluation (no basis on which to assess site's significance)
	48LN1099	Secondary	Avoid or excavate	Potentially eligible (local)
	48LN1100	Direct	Avoid or excavate	Potentially eligible (local)

TABLE 2-I (Continued)

Site #	Type of Current Impact	Recorder's Recommendation	Additional Data
48SU213	Secondary	Map, test	Potentially eligible
48SU244	Secondary	Determine eligibility	Potentially eligible (local)
48SU257	Secondary	Test	Potentially eligible (local)
48SU453	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU454	Secondary	No further work for AR's project	Potentially eligible (evaluation inconsistent with recommendation)
48SU472	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU474	Secondary	Record	Not eligible (evaluation inconsistent with recommendation)
48SU489	Secondary	Monitor	Not eligible(?) (evaluation inconsistent with recommendation)
48SU490	Secondary	Monitor	Potentially eligible
48SU493	Secondary	Avoid	Potentially eligible
(i.u) Sulfur pipeline branch from East Dry Basin (NWP) (SP-EDB-WDB)			
48SU508	Secondary	Record	Potentially eligible (local)

TABLE 2-II

SOURCES OF POTENTIAL IMPACT TO HISTORIC TRAILS LISTED BY RILEY RIDGE PROJECT FACILITIES

Site Number	Site Name	Location			Source of Impact (Facility)	Action*
		TN	RW	Sec.		
48LN225	Sublette Cutoff	24	113	5	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		24	114	1	Transmission line from NPP (UP&L)	PA
		24	114	11	Transmission line from NPP (UP&L)	PA
		24	114	12	Transmission line from NPP (UP&L)	PA
		25	112	18	Sulfur pipeline to loadout	PA, B, SC, N
		25	112	19	Sulfur pipeline to loadout	PA, B, SC. N
		25	112	30	Sulfur pipeline to loadout	PA, B, SC, N
		25	112	31	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	1	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	12	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	13	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	24	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	25	Sulfur pipeline to loadout; Sour gas pipeline to Craven Creek	PA, B, SC, N; PA, B, SC
		25	113	26	Sour gas pipeline to Craven Creek	PA, B, SC
		25	113	35	Sour gas pipeline to Craven Creek	PA, B, SC
		25	113	36	Sulfur pipeline to loadout	PA, B, SC, N
		26	113	36	Sulfur pipeline to loadout	PA, B, SC, N
48LN947	Hams Fork Cutoff	20	115	3	Transmission line from NPP to Craven Creek	PA, B, SC
		21	113	19	Sulfur pipeline to loadout; Sulfur loadout	PA, B, SC, N
		21	113	30	Sulfur pipeline to loadout; Sulfur loadout	PA, B, SC, N
		21	114	24	Sulfur loadout; Transmission line branch to sulfur loadout	PA, B, SC, N

* PA=Proposed Action, B=Buckhorn, SC=Shute Creek, N=Northern

TABLE 2-II (continued)

Site Number	Site Name	Location TN	Location RW	Location Sec.	Source of Impact (Facility)	Action*
48LN947 (con't)	Hams Fork Cutoff	21	114	25	Sulfur loadout	PA, B, SC, N
		21	114	26	Railroad spur to Craven Creek	PA, B, SC
		21	114	27	Railroad spur to Craven Creek; Transmission line to Craven Creek (NWP)	PA, B, SC
		21	114	28	Transmission line to Craven Creek (UP&L)	PA
		21	114	29	Transmission line to Craven Creek (UP&L)	PA
		21	114	32	Transmission line to Craven Creek (UP&L)	PA
		21	115	21	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		21	115	22	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		21	115	26	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		21	115	27	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		21	115	36	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
	Hams Fork Cutoff Variant	19	112	10	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	112	11	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	112	13	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	112	14	Carbon dioxide pipeline to Mapco	PA, B, SC
48LN948	Slate Creek Cutoff	23	111	7	Water pipeline from Green River	PA, B, SC
		23	111	18	Water pipeline from Green River	PA, B, SC
		23	113	13	Sulfur pipeline to loadout	PA, B, SC, N
		23	113	14	Sulfur pipeline to loadout	PA, B, SC, N
		23	113	15	Sulfur pipeline to loadout	PA, B, SC, N
		23	113	16	Sulfur pipeline to loadout	PA, B, SC, N
		23	113	17	Sour gas line to Craven Creek; Sulfur line to loadout	PA, B, SC,; PA, B, SC, N
		23	114	11	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		23	114	13	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		23	114	14	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		23	114	15	Transmission line from NPP (UP&L)	PA

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TABLE 2-II (continued)

Site Number	Site Name	Location			Source of Impact (Facility)	Action*
		TN	RW	Sec.		
		23	114	16	Transmission line from NPP (UP&L)	PA
48LN949	Opal Stage Road	21	114	2	Transmission line to Craven Creek (UP&L)	PA
		21	114	11	Transmission line to Craven Creek; Transmission line to sulfur loadout	PA; PA, B, SC, N
		21	114	14	Transmission line to Craven Creek (UP&L) Railroad spur to Craven Creek; Transmission line to sulfur loadout; Transmission line to Craven Creek	PA; PA, B, SC; PA, B, SC, N; PA, B, SC
		21	114	22	Transmission line to Craven Creek; Railroad spur to Craven Creek	PA, B, SC
		21	114	23	Transmission line to Craven Creek	PA, B, SC
		21	114	26	Railroad spur to Craven Creek	PA, B, SC
		21	114	27	Railroad spur to Craven Creek; Transmission line to Craven Creek	PA, B, SC
		22	113	6	Sour gas line to Craven Creek; Transmission line from Shute Creek (UP&L)	PA, B, SC; PA
		22	113	7	Sour gas line to Craven Creek	PA, B, SC
		22	114	12	Sour gas line to Craven Creek	PA, B, SC
		22	114	13	Sour gas line to Craven Creek	PA, B, SC
		22	114	24	Sour gas line to Craven Creek; Access road to Craven Creek	PA, B, SC
		22	114	25	Sulfur pipeline to loadout; Transmission line to Shute Creek	PA, B, SC, N; SC
		22	114	35	Transmission line from NPP (AQ+Ex)	PA, B, SC, N
		22	114	36	Sulfur line to loadout; Transmission line to Craven Creek (UP&L)	PA, B, SC, N; PA
		23	113	8	Sour gas line to Craven Creek; Sour gas line to Shute Creek	PA, B, SC; SC

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TABLE 2-II (continued)

Site Number	Site Name	Location TN	Location RW	Location Sec.	Source of Impact (Facility)	Action*
48LN949 (con't)	Opal Stage Road	23	113	9	Sour gas line to Craven Creek; Sour gas line to Shute Creek	PA, B, SC; SC
		23	113	17	Sour gas line to Craven Creek; Sour gas line to Shute Creek	PA, B, SC; SC
		23	113	20	Sour gas line to Craven Creek; Sour gas line to Shute Creek; Sulfur pipeline to loadout	PA, B, SC; SC; PA, B, SC, N
		23	113	29	Sour gas line to Craven Creek; Sour gas line to Shute Creek	PA, B, SC; SC
		23	113	32	Sour gas line to Craven Creek	PA, B, SC
		23	114	36	Sour gas line to Craven Creek	PA, B, SC
		24	113	3	Sulfur pipeline to loadout; Sour gas line to Craven Creek	PA, B, SC, N; PA, B, SC
		24	113	10	Sour gas pipeline to Craven Creek	PA, B, SC
		24	113	22	Sulfur pipeline to loadout	PA, B, SC, N
		24	113	23	Sulfur pipeline to loadout	PA, B, SC, N
		25	112	19	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	1	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	12	Sulfur pipeline to loadout	PA, B, SC, N
		25	113	13	Sulfur pipeline to loadout	PA, B, SC, N
		26	113	25	Sulfur pipeline to loadout	PA, B, SC, N
		26	113	36	Sulfur pipeline to loadout	PA, B, SC, N
48SU387	Lander Cutoff	29	113	5	Sawmill Unit (W)	PA, B, SC, N
		29	113	6	Sawmill Unit (W)	PA, B, SC, N
		29	114	1	Sawmill Unit (W)	PA, B, SC, N
		29	114	2	Sawmill Unit (W)	PA, B, SC, N
		29	114	3	Riley Ridge Unit (AQ)	PA, B, SC, N
		29	114	4	Riley Ridge Unit (AQ)	PA, B, SC, N
		29	114	7	Riley Ridge Unit (AQ)	PA, B, SC, N
		29	114	8	Riley Ridge Unit (AQ)	PA, B, SC, N

* PA=Proposed Action, B=Buckhorn, SC=Shute Creek, N=Northern

TABLE 2-II (continued)

Site Number	Site Name	Location			Source of Impact (Facility)	Action*
		TN	RW	Sec.		
48SU387 (con't)	Lander Cutoff	29	114	9	Riley Ridge Unit (AQ)	PA, B, SC, N
		29	115	12	Riley Ridge Unit (AQ)	PA, B, SC, N
		29	115	11	Riley Ridge Unit (AQ)	PA, B, SC, N
		29	115	10	Darby Mt. Unit (AQ)	PA, B, SC, N
		29	115	15	Lake Ridge Unit (AQ)	PA, B, SC, N
		29	115	16	Lake Ridge Unit (AQ)	PA, B, SC, N
		29	115	17	Darby Mt. Unit (AQ)	PA, B, SC, N
		29	115	19	Darby Mt. Unit (AQ)	PA, B, SC, N
		29	115	20	Darby Mt. Unit (AQ)	PA, B, SC, N
		29	115	21	Lake Ridge Unit (Ex)	PA, B, SC, N
48SW827	Oregon Trail (main trail)	19	111	18	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	111	19	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	111	20	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	111	21	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	111	28	Carbon dioxide pipeline to Mapco	PA, B, SC
		19	111	29	Carbon dioxide pipeline to Mapco	PA, B, SC
		21	109	6	Railroad to Stauffer Chemical spur	PA
		21	109	8	Carbon dioxide and sales gas line from Shute Creek	SC
		21	109	10	Carbon dioxide and sales gas line from Shute Creek	SC
		21	109	15	Carbon dioxide and sales gas line from Shute Creek	SC
		21	109	16	Carbon dioxide and sales gas line from Shute Creek	SC
		21	109	17	Carbon dioxide and sales gas line from Shute Creek	SC
		21	109	28	Railroad to Stauffer Chemical spur	PA
		21	109	29	Railroad to Stauffer Chemical spur	PA
		21	109	32	Railroad to Stauffer Chemical spur	PA

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TABLE 2-II (continued)

Site Number	Site Name	Location			Source of Impact (Facility)	Action*
		TN	RW	Sec.		
49SW827 (con't)	Oregon Trail (main trail)	21	110	1	Carbon dioxide and sales gas line from Shute Creek	SC
		21	110	12	Carbon dioxide and sales gas line from Shute Creek	SC
		22	109	31	Railroad to Stauffer Chemical spur	PA
		23	108	9	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		23	108	10	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
48SW1226	Overland Trail	18	105	5	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		18	105	6	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		18	105	7	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		18	106	12	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		19	105	29	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		19	105	32	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
48SW1841	Sublette Cutoff	26	109	1	Railroad to Stauffer Chemical spur	PA
		26	109	2	Railroad to Stauffer Chemical spur	PA
		26	110	2	Carbon dioxide and sales gas line from Buckhorn to Trailblazer	B, SC, N
		26	110	3	Carbon dioxide and sales line gas from Buckhorn to Trailblazer	B, SC, N
		26	110	7	Carbon dioxide and sales gas from EDB/WDB to Trailblazer	PA, B, N

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TABLE 2-II (continued)

Site Number	Site Name	Location			Source of Impact (Facility)	Action*
		TN	RW	Sec.		
48SW1841 (con't)	Sublette Cutoff	26	110	8	Carbon dioxide and sales gas from EDB/WDB to Trailblazer	PA, B, N
48SW3864/ 48SW3869	Bryan to South Pass City and Green River to South Pass City Stage Routes	20	106	1	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		20	106	2	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		20	106	3	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		21	107	23	Carbon dioxide and sales gas line from Shute Creek	SC
		21	107	26	Carbon dioxide and sales gas line from Shute Creek	SC
		22	107	3	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
48SW3864/ 48SW3869 (con't)	Stage Routes	22	107	10	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
		22	107	15	Carbon dioxide and sales gas line to Trailblazer	PA, B, SC, N
48SW4195	Kinney Cutoff	22	109	6	Railroad to Stauffer Chemical spur	PA
		22	109	7	Railroad to Stauffer Chemical spur	PA
		22	110	1	Railroad to Stauffer Chemical spur	PA
48SW4197	Slate Creek Cutoff	23	109	5	Railroad to Stauffer Chemical spur	PA
		24	109	32	Railroad to Stauffer Chemical spur	PA

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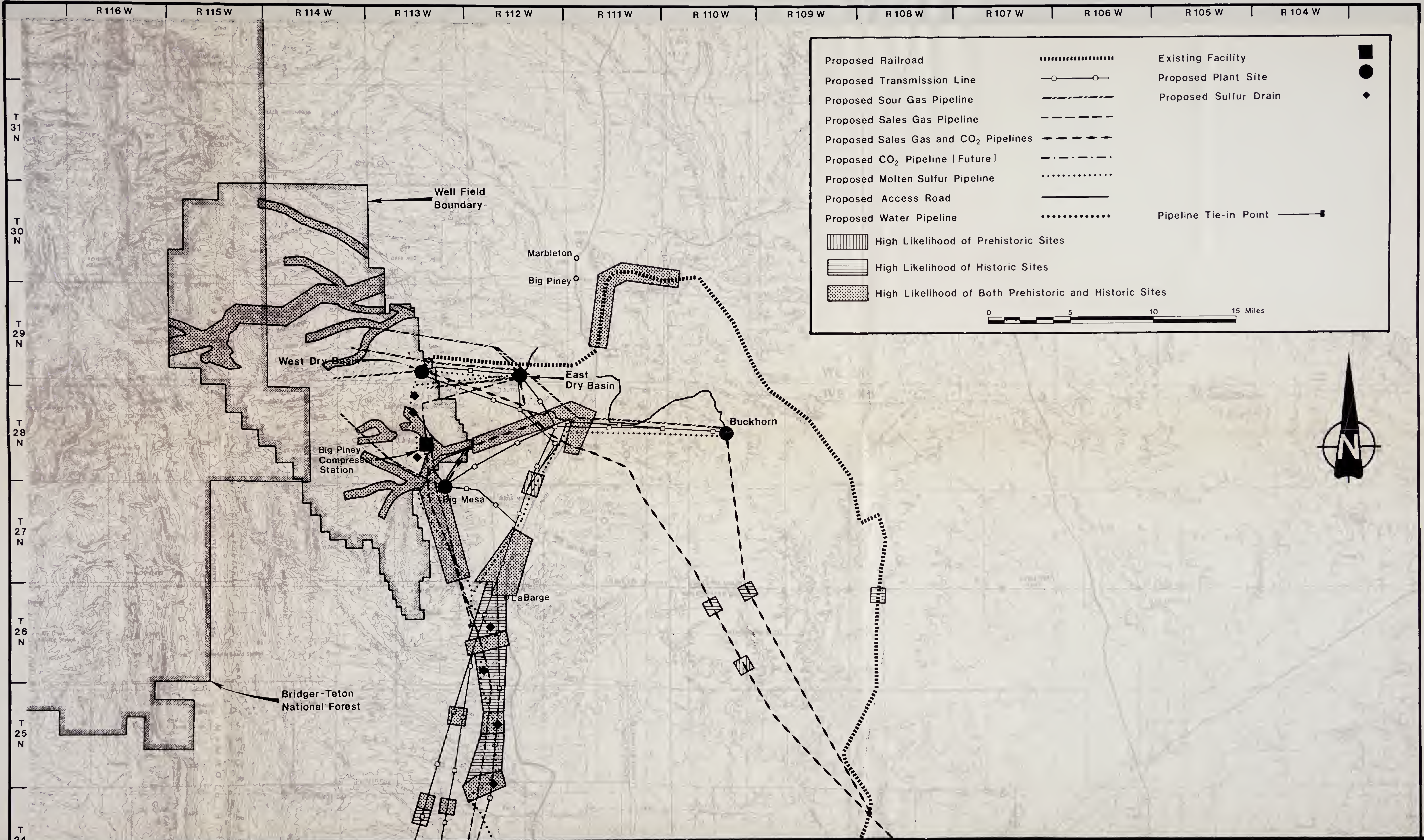
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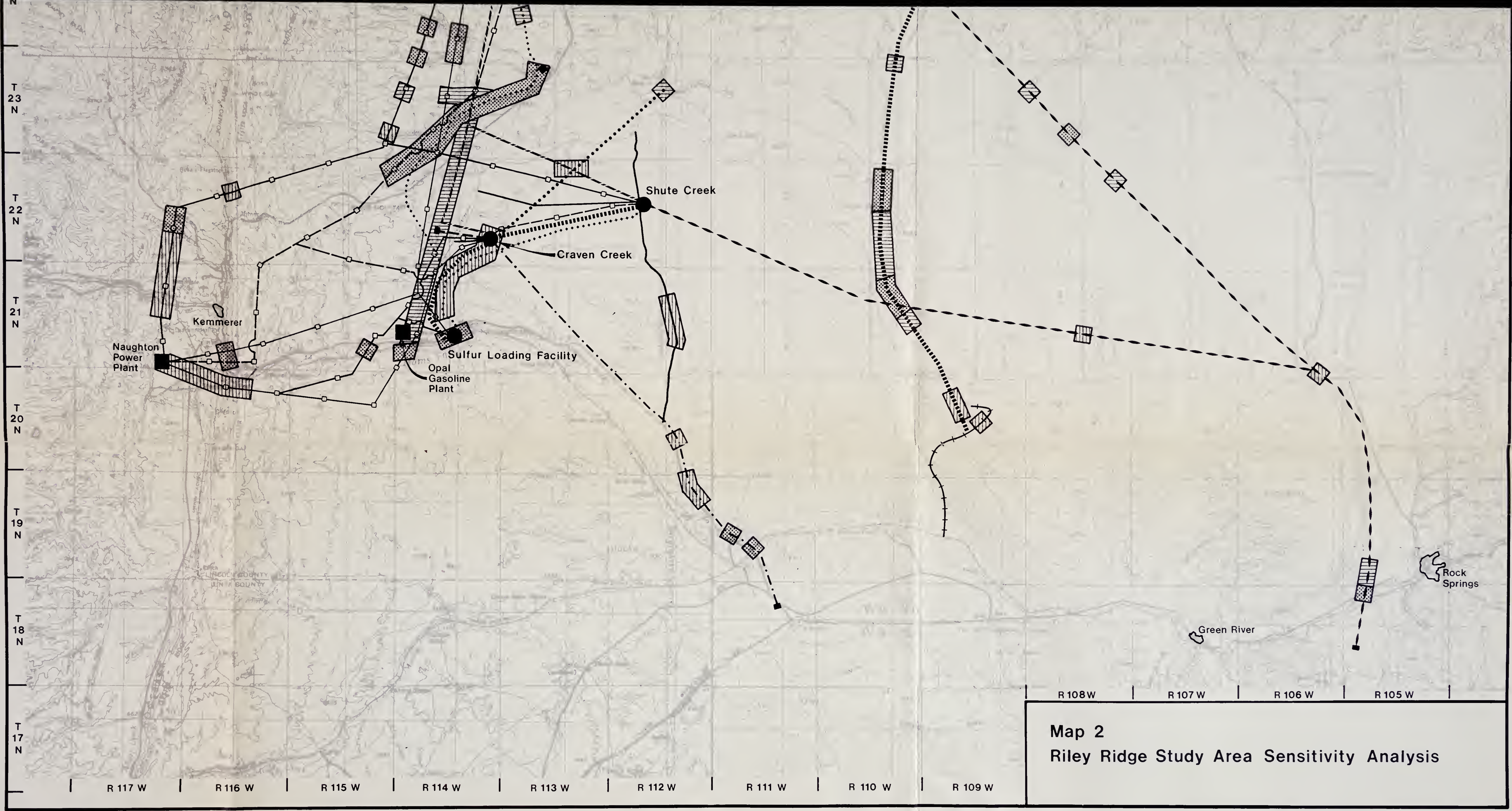
Proposed Railroad
Proposed Transmission Line
Proposed Sour Gas Pipeline
Proposed Sales Gas Pipeline
Proposed Sales Gas and CO₂ Pipelines
Proposed CO₂ Pipeline [Future]
Proposed Molten Sulfur Pipeline
Proposed Access Road
Proposed Water Pipeline
Existing Facility
Proposed Plant Site
Proposed Sulfur Drain
Pipeline Tie-in Point
High Likelihood of Prehistoric Sites
High Likelihood of Historic Sites
High Likelihood of Both Prehistoric and Historic Sites
0
5
10
15 Miles
N
Well Field Boundary
Marbleton
Big Piney
West Dry Basin
East Dry Basin
Buckhorn
Big Piney Compressor Station
Big Mesa
LaBarge
Bridger-Teton National Forest



Map 2
Riley Ridge Study Area Sensitivity Analysis

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